

Hackman, C. D.
1964

Catalog

October 13

Baker Island, Pacific Ocean

20. Pluvialis dominica ♀ Ovary 5x4mm 60.8 gms.
Bill black, feet black, legs grey. Bird was exhausted
and emaciated. It was unable to fly and was
easily caught by hand. Stomach saved [40470]

21. Squid sp. regurgitated by Sula dactylatra at 1700.

October 18 McKean Island, Pacific Ocean

22. Small fish (halfbeak sp.?) from netted Gygis alba
at 1500.

23. Squid sp. regurgitated by Gygis alba nestling at 1300.

October 19

24. Two squid sp. from netted Gygis alba at 1500.

October 20

25. Sterna lunata ♀ Ovary 12mm. 1. ovum 3mm 103.1gm.
Iris brown, bill black, feet and legs black. Stomach
saved. [40501]

26. Numenius tahitiensis. Found dead - badly decomposed.
Skeletonized [40496]

27. Two fish from netted Gygis alba at 1530.

28. Gygis alba ♂ Testes 5x2mm. 92.0 gms.
Iris dark brown, bill black with blue base, legs and
feet blue. [40515] Stomach saved.

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October 23

Gardner Island, Pacific Ocean

29. Pluvialis dominica ♀ Ovary 9mm. ova minute 119.2gms.
Iris brown, bill brownish-black, feet and legs grey. Stomach
saved. [40552]

30. Pluvialis dominica ♀ Ovary 6mm. ova minute 122.0gms.
Iris brown, bill brownish-black, feet and legs grey.
Stomach saved. [40551]

31. Anous stolidus ♂ Testes L. 7x3mm R 5x2mm. 155.5gms.

November 6

Phoenix Island, Pacific Ocean

32 Small fish taken from a netted Gygis alba at 1430.

November 7

33 Sula dactylatra — Alcoholic — 1699.5gms.
Iris yellow, bill yellow, legs + feet greenish-yellow, gular skin black [40603]

November 8 Birnie Island, Pacific Ocean

34. Heteroscelus incanum ♂ Testes 2x1mm 87.3gms.
Iris brown, bill dark olive, feet and legs yellow. Stomach saved [40623]

November 9

35 Two squid taken from a netted Gygis alba at 0800.

November 11

Enderbury Island, Pacific Ocean

36. Fregata minor ♂ Testes R 12x10mm L 15x9mm 906.3gms
Iris dark brown, bill dark olive (well worn), legs and feet
brown; gular skin red orange. Taken from nest. Stomach saved.
[40638]

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Nov. 21

Motu Upua, Christmas Island

37. Pterodroma alba ♂ Testes L 5x2 R 4x2 244.0 gm.

Iris brown, bill black, feet + legs flesh colored down to first joint of foot, then black to tip. [40672] Skeleton. Stomach saved.

Nov. 22.

Cook Island, Christmas Island

38. Procelsterna cerulea ♀ 1. ovum 15mm. 55.6 gm.

Iris brown, bill black, feet and legs dark grey with flesh-colored webbing. Stomach saved [40681]

39. Procelsterna cerulea ♀ Ovary 8mm, 1. ovum 2 mm. 45.6 gm.

Iris brown, bill black, feet and legs dark grey with pink webbing. Stomach saved. [40685]

November 23

40. Heteroscelus incanum ♀ ovary 7mm. 139.7 gm.

bill dark olive, legs and feet dull yellow. Stomach saved. [40675]

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October 5

1900Z, Wilder Shoal

I-280 Ectoparasites from underwing coverts and breast feathers of Pluvialis dominica captured at sea. 6 specimens.

October 7

I-281 Ectoparasite from Arenaria intrepes captured at sea near Wilder Shoal. 1 specimen from upper wing coverts.

October 14

Baker Island

I-282 Ectoparasites from nestling Anous stolidus. Nestling was taken from a small islet in the lagoon.

October 15

I-283 Ticks with eggs. Found under a small piece of coral rubble at a roosting spot of Anous stolidus near the lagoon nesting colony.

October 14

I-284 Berlizi sample of rubble from under old logs and boards.

I-285 Same as I-284

I-286 " " "

I-287 " " "

Oct. 15 I-288 Berlizi sample dirt + coral rubble from roost of Anous stolidus

I-289 " " " " " " "

McKean I-290 " " " " " " "

Oct. 21

I-291 Ticks from bander in a colony of Sterna fuscata

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October 22

Gardner Island, Pacific Ocean

- I-292 Grasshopper sp. from coral rubble in village - 3 specimens.
very abundant.
- I-293 Spider sp. from building in village
- I-294 Ant sp. from coral rubble in village
- I-295 Insect sp. - sweep netting over Boerhaavia and Sandburn
grass. 20+ specimens.
- I-296 Ant sp. - from coral rubble in village. - 1 specimen.
- I-297 Mealy bug sp. - from Boerhaavia - 9 specimens.
- I-298 Insect sp. - 2 specimens - one on ground and one from
the back of a hand where it was biting.
- I-299 Spider sp. - from Boerhaavia - 1 specimen
- I-300 Mite sp. - from ground near Boerhaavia - 2 specimens
- I-301 Moth sp. - from Boerhaavia - 2 specimens.
- I-302 Insect sp. - from Boerhaavia - 2 specimens
- I-303 Aphid sp. (and ant sp. attendants) from Scaevola.
- I-304 Scale sp. (and ant sp. attendants) from
- I-305 Red mites from Sida fallax.
- I-306 Ant sp. - from coral rubble on lagoon side of island.
- I-307 Insect sp. - from Sida fallax with sweep net. 2 spec.
- I-308 Ant sp. - from Sida fallax with sweep net.
- I-309 Caterpillar - from Sida fallax - 1 specimen.
- I-310 Insect sp. - from Sida fallax - 1 specimen.
- I-311 Plant louse (bright red and black) from Sida fallax - 3 specimens
- I-312 Ladybird beetle (?) from Scaevola - 4 specimens
- I-313 Fly sp. - from Scaevola - 1 specimen.
- I-314 Insect sp. - from Sida fallax - 2 specimens
- I-315 Ectoparasites from breast and head of Erolia
acuminata

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October 22

Gardner Island, Pacific Ocean

- I-316 Insect sp - collected at night - attracted to the bright navigation lights. 3 specimens.
- I-317 Fly sp - attracted to navigation lights at night - about 15 specimens.
- I-318 Dermestid sp. (?) - from coral rubble on floor of abandoned hut.
- I-319 Cricket sp - from coral rubble at night. 2 specimens.
- I-320 Spider sp. - from coral rubble in abandoned hut. 1 spec.
- I-321 Lacewing Fly (?) from Scaevola and Sida - 3 specimens.
- I-322 Cricket sp - from coral rubble and rubbish - 1 specimen
- I-323 Roach sp. - at night on ~~Scaevola~~ Messerschmidia.
- I-324 ~~cricket~~ cricket sp. - 2 specimens from Scaevola at night.
light green when collected - fading to yellow in alcohol
- I-325 Silverfish sp - 4 specimens collected at night under coral rubble and rubbish.
- I-326 Roach sp. - at night from Scaevola. - 1 spec.
- I-327 Ant sp. 4 specimens from ground under Boerhaavia.
- I-328 Spider sp. - From Coconut trunks at night. Larger of the two specimens had the egg sack.
- I-329 Roach spp. - 2 specimens from Scaevola at night.
- I-330 Scorpion sp. - 1 specimen at night under rubbish.
- I-331 Scorpion sp - 1 specimen at night under coconut palm debris.
- October 23
I-332 ~~Roach~~ Beetle sp - 1 specimen from Messerschmidia.
- I-333 Roach sp. - 1 specimen from coral rubble and leaf debris.
- I-334 Roach sp. - 2 specimens from beneath rubbish
- I-335 Spider sp - 1 specimen from Scaevola.
- I-336 Bee sp. - 2 specimens from Scaevola blossoms.
- I-337 leaf miner sp. - 2 specimens dug out of the underside of Scaevola leaves.

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October 23

Gardner Island, Pacific Ocean

- I-338 Caterpillar sp. - 1 specimen from Sida fallax.
I-339 Insect sp. - 1 specimen from Spider web.
I-340 Wasp sp. - 1 specimen from Scaevola.
I-341 Ectoparasites from Arenaria interpres from breast and from primaries.

October 18

McKean Island, Pacific Ocean

- I-342 Hippoboscid sp. - from Fregata ariel.

October 21

- I-343 Berlese sample from nest of Sula sula
I-344 Berlese sample from nest of Sula sula
I-345 Berlese sample from nest of Fregata minor
I-346 Berlese sample from nest of Fregata minor
I-347 Berlese sample from nest of Anous stolidus
I-348 Berlese sample from nest of Anous stolidus

October 23

Gardner Island, Pacific Ocean

- I-349 Butterfly species - 2 specimens from Sida fallax.
I-350 Butterfly species - 1 specimen - sweep net.
I-351 Moth sp. - 1 specimen from Scaevola.

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October 22

McKean Island, Pacific Ocean

I-352 Berlese sample

I-353 Berlese sample

I-354 Berlese sample

October 24

Sydney Island, Pacific Ocean

I-355 Wasp sp. - from eaves of hut - 3 specimens^{Abundant}

I-356 Scorpion sp. - 1 specimen from coral rubble on the floor of abandoned hut - common

I-357 Ant. sp. - from Scaevola leaves and stems. ^{Abundant}

I-358 Wasp sp. - from Scaevola blossoms - 2 specimens - Uncommon

I-359 Bee sp. - from Scaevola blossoms - uncommon

I-360 Fly sp. - from mud hole on edge of lagoon. This species customarily walks on water surface - common - 2 specimens

I-361 Fly sp. (Gnat) - on Sesuvium on edge of lagoon - 1 specimen - fairly common.

I-362 Isopod sp. - under coconut husks on damp ground around mud hole on edge of lagoon - 4 specimens - common.

I-363 Insect sp. - (black + minute) from coconut husks - uncommon

I-364 Sand flea sp. - from under coconut husks on damp ground around edge of lagoon - 2 specimens

I-365 Beetle sp. - (small, black) from under coconut husks on damp ground on lagoon edge. - 2 specimens - common.

I-366 Annelid sp. - from damp ground under coconut husks - 1 specimen.

I-367 Isopod sp. - from under coconut husks on dry ground - small and fuzzy - 7 specimens - common

I-368 Spider sp. - from coconut husk on dry ground - 1 specimen

I-369 Insect sp. - (small mite-sized, whitish) on coconut husk on dry ground. - 1 specimen - uncommon

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October 24

Sydney Island, Pacific Ocean

- I-370 Mite sp. - (Red) - from coconut husk on dry ground - 1 specimen, uncommon
- I-371 Insect sp. - on inside of coconut husk on dry ground - 1 specimen - uncommon
- I-372 Insect sp. - on coconut husk on dry ground - 3 specimens uncommon
- I-373 Spider sp. - from coconut husk on dry ground - 1 specimen
- I-374 Termite sp. - from small stumps - 6 specimens, uncommon
- I-375 Roach sp. - from small stump - 1 specimen
- I-376 Ladybird Beetle - 2 specimens from Scaevola. Fairly common
- I-377 Scale sp. - (with ant attendants) from upperside of Scaevola leaves. - Abundant
- I-378 Insect sp. - 2 specimens from sweep netting of Boerhaavia. Uncommon.
- I-379 Aphid sp. - (purplish) from Tribulus blossom - 10+ specimens - found only on Tribulus which isn't blooming on a wide scale at present.
- I-380 Exoskeleton of insect sp. - from sweep netting of Boerhaavia.
- I-382 Insect sp. - 2 specimens from sweep netting Boerhaavia. Uncommon
- I-383 Insect sp. - 3 specimens from sweep netting of Boerhaavia. Fairly common.
- I-384 Fly sp. - 1 specimen with sweep net. Fairly common
- I-385 Grasshopper sp. - 1 specimen from ground in sparse vegetation. fairly common
- I-386 Grasshopper sp. - 1 specimen with sweep net.
- I-387 Cricket sp. - 1 specimen from Scaevola - common at night.
- I-388 Aphid sp. - (with ant attendants) (light green) from axils of leaves and blossoms of Sida.

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October 24

Sydney Island, Pacific Ocean

- I-389 Insect sp. - (small, whitish) from leaf of Mirinda -
uncommon.
- I-390 Moth sp. - 1 specimen from Boerhaavia - sweep
netting - uncommon
- I-391 Insect sp. - 3 specimens from Boerhaavia - sweep
netting - uncommon
- I-392 Scorpion sp. - 2 specimens from abandoned huts -
common.
- I-393 Spider sp. - 1 specimen from abandoned hut - common
- I-394 Caterpillar - 1 specimen from Messerschmidia -
uncommon.
- I-395 Roach sp. - 1 specimen from Scaevola - at night - common
- I-396 Roach sp. - 1 specimen from Scaevola - at night - common
- I-397 Roach sp. - 4 specimens from Scaevola from SE end
of island - at night - common
- I-398 Isopod sp. - 1 specimen from under rock - uncommon
- I-399 Fly sp. - 2 specimens attracted to navigation lights
at night - fairly common
- I-400 Spider sp. - 1 specimen (maroon) under rock on
sandy beach.

October 25

Sydney Island, Pacific Ocean

- I-401 Cricket sp. - 1 specimen from rubbish on floor of
abandoned hut.
- I-402 Ladybird Beetle - 1 specimen from Scaevola
- I-403 Ladybird Beetle - 1 specimen from Scaevola
- I-404 Wasp sp. - 1 specimen from Scaevola. Uncommon

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October 25

Sydney Island, Pacific Ocean

I-405 Fly sp. - 1 specimen from Sesuvium - common

I-406 Silverfish sp. - 1 specimen from under rubbish - common

I-407 Dragonfly sp. - 1 specimen from around small potholes
on edge of lagoon. fairly common.

October 23

Gardner Island, Pacific Ocean

I-408 Berlese sample - leaf debris from base of tree with lesser Frigate colony

I-409 Berlese sample - leaf debris from base of tree with lesser Frigate colony

I-410 Berlese sample - leaf debris from base of tree with lesser Frigate colony

October 25

Sydney Island, Pacific Ocean

I-411 Berlese sample - from island in lagoon - from nest of Anous stolidus

I-412 Berlese sample - from island in lagoon - from nest of Anous stolidus

I-413 Berlese sample - from island in lagoon - from nest of Anous stolidus

October 29

Tutuila Island, American Samoa

I-414 Ectoparasites from Fruit bat

I-415 Ectoparasites from Fruit bat

I-416 Ectoparasites from Fruit bat

I-417 Ectoparasites from Fruit bat

October 31

I-418 Ectoparasites from Fruit bat

I-419 Ectoparasites from Fruit bat

I-420 Ectoparasites from Fruit bat

I-421 Ectoparasites from Fruit bat

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November 2

At Sea, U.S.S. Lipan

I-422 Pelagic water strider sp. - 1 specimen picked up from starboard side of ship at 1430. Ship had been taking some water over the sides and thru the scuppers. Insect was observed hopping around on the dry deck by a crewman and brought to our attention. It was a light, fluorescent blue before immersion in alcohol.

November 4

Phoenix Island, Pacific Ocean

I-423 Berlese sample from nest of Puffinus nativitatus.

I-424 Berlese sample from nest of Fregata minor.

I-425 Berlese sample from nest of Sula sula

November 6

Phoenix Island, Pacific Ocean

I-426 Berlese sample from roosting area of Sterna fuscata

I-427 Berlese sample from nest of Fregata ariel.

I-428 Mallophaga species from Sterna fuscata - breast and throat

I-429 Mallophaga species from Sterna lunata - breast and throat

I-430 Tich species from Sterna fuscata.

I-431 ~~Beetle~~ Hippoboscid species from Anous stolidus.

I-432 Ectoparasite from throat feathers of Puffinus nativitatus.

November 8

Birnie Island, Pacific Ocean

I-433 ~~Beetle~~ Ectoparasite species from Anous minutus

I-434 Hippoboscid species from Anous stolidus.

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November 10

Endebury Island

I-435 Mite sp. (Red) from nestling Sula sula.
Attached to skin on back of bird.

I-436 Berlese sample - nest of Sula dactylatra.

I-437 Berlese sample - nest of Fregata minor

I-438 Berlese sample - nest of Sula leucogaster

November 19

Jarvis Island

I-439 Berlese sample - nest of Fregata ariel.

I-440 Berlese sample - of Lepturus and debris from nesting colony of Fregata ariel

I-441 Berlese sample - of debris from nest of Fregata ariel

November 16

Jarvis Island

I-442 Berlese sample - nest of Sula sula.

I-443 Berlese sample - nest of Phaethon rubricauda.

I-444 Berlese sample - nest of Fregata ariel.

November 27

Palmyra Island

I-445 Ectoparasite from Mareca sp. This ^{mallophaga} ~~parasite~~ came off of one of three widgeons that were collected together (2 - Mareca americana + 1 Mareca penelope). All were carried together in a mussette bag.

Itinerary - ATF #7

Mc Bee ✓

Hackman

Jan 10 - left hotel 0750 for airport	March 7 Arrive Jarvis - 1700
Jan 10 - take off from Dulles - 1020 E.S.T.	March 11 Depart Jarvis - 1030
Jan 10 - arrive Honolulu 4:30 pm H.S.T.	March 12 Arrive Christmas - 0800
Jan 25 - Depart Pearl Harbor - 0900	March 15 Depart Christmas - 0945
Feb. 1 - Arrive Howland Is. - 0930	March 16 Arrive Palmyra - 1400
Feb. 3 - Depart Howland Is. - 0720	March 18 ¹⁹ Depart Palmyra 0830
Feb. 3 - Arrive Baker - 1200	March 22 Arrive Pearl Harbor 1400
Feb. 5 - Depart Baker - 0800	
Feb. 6 - Arrive McKean - 0900	
Feb. 8 - Depart McKean - 0800	
Feb. 9 - Arrive Hull - 0700	
Feb. 9 Depart Hull - 1800	
Feb. 10 Arrive Birnie - 0800	
Feb. 12 Depart Birnie - 0700	
Feb. 12 Arrive Enderbury - 1100	
Feb. 17 Depart Enderbury - 0800	
Feb. 17 Arrive Canton - 1000	
Feb. 18 Depart Canton - 0800	
Feb. 21 Arrive Pago Pago - 0900	
Feb. 25 Depart Pago Pago - 0900	
Feb. 26 Arrive Fakaofo - 0830	
Feb. 28 Depart Fakaofo - 0900	
Feb. 28 Arrive Nukunonu - 1130	
March 2 Depart Nukunonu - 2330	
March 3 Arrive Atafu - 1030	
March 4 Depart Atafu - 1330	

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Jan. 10

D.C. - Honolulu

Left hotel at 0750 and took taxi to airline bus terminal. Left terminal at 0845 and arrived at Dulles around 0940 - a little late because of the snow storm. Plane took off at 1020.

Arrived in L.A. at 12 noon pacific time and departed there at 1:30 p.m. on Pan Am flight 819. This plane took an unusually long take off run, using up all but the last 1000 feet of runway before getting off the ground. On the way into the Honolulu airport the plane came dangerously close to undershooting the runway by about 400 yards. When about 200 feet off the ground it was still quite a distance from the end of the runway and dropping fast. The pilot applied full power and landed on the very edge of the runway with the engines screaming. The plane was going so fast when it hit the runway it took almost the entire strip to get stopped. Max + I sort of talked (cussed) it onto the runway when we realized he was going to be short. We sweat the last couple of hundred feet before he finally touched down safely.

We immediately rented a car, a '65 Falcon with only 2070 miles on the speedometer, and headed for the hotel. Called Jan Ely from the hotel and then headed out to say hi and coordinate things.

At 11 p.m. I went out to the airport and met Norman Heyford. Finally sacked out at 12:45 am. (7:30 am E.S.T. on Jan. 11). A long day!

$$\begin{array}{r}
 140 \\
 80 \\
 \hline
 220
 \end{array}$$

502
 842
 140

2
 3
 4
 5

$$40 \overline{) 272}$$

189.14

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January 11

Honolulu

Max + I ate a casual breakfast and then headed for Pearl Harbor for gate passes and then a visit to the Hitchiti. I goofed terribly in that I forgot my Pearl Harbor pass + SI ID card. so we had to return to the hotel and then drive back out to Pearl Harbor. Finally got the passes and entered the base at 10 a.m. Spent about 1 hour driving around showing Max where everything was.

We then drove out to Pearl City to check on the arrival of the various shipments. Everything shipped to date was on hand. We rosted around for about 1 hour and then left to eat lunch.

At 1 p.m. we went on board the U.S.S. Hitchiti to introduce ourselves and look around a bit. The ship looks good. The after hold has storage room to spare - more than the ships on our last three trips combined. After spending about 1 hour looking around and talking with the XO we headed back toward the hotel. Stopped at Ala Moana Shopping Center for some field clothing + other items and then returned to the hotel via the Hazel Bishop Museum.

At 11 p.m. Max woke me up and we headed out to the airport to pick Binion up. His plane arrived 15 minutes ahead of the scheduled time of 11:25 but we caught him before he left in a taxi. Sacked out at 12:30 again.

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January 12 Honolulu

Up at 7 a.m. and had breakfast with the gang. Took Binion and Norman out to Hickam AFB so they could complete arrangements for their flight to Sand Island tomorrow morning. This took until 1030. We then drove to the Pan Am. airline freight terminal to mail a truck of bird skins back to D.C. which took another hour.

Returned to the hotel for lunch and then headed out to Elysia to try and locate about 15,000 #3 bands Binion wanted to take to Sand Island but couldn't find all of them. Returned to the hotel and picked Max up and then headed for the Ala Moana shopping center to pick up some more items for Binion and for the ATF. Returned to the hotel around 3:15 and called it a day.

Yesterday on the way back to the hotel from the shopping center the car's ~~trunk~~ brakes started acting funny with the pedal going all the way to the floor. I took the car over to National and they said I'd have to swap cars because the brake line had broken. So I got another '65 Falcon, this one with 2926 miles on the speedometer.

January 13 Honolulu

Binion and Norman left the hotel at 5 am for their flight up to Sand Island. No more distractions or chores to do for others for a few days so we can devote all our efforts toward ATF preparations.

Went out to the ship this morning to check

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January 13

Honolulu

on a few things with the XO. No one was on the ship so we turned around and drove back to town to do some shopping. Spent the rest of the day comparing prices on things like hot plates, travel irons and fluorescent lights. Finally bought a travel iron at the G.E.M. store.

January 14

Honolulu

Called up the ship to check and see if the XO would be on board. Then drove out and picked up the outboard motors and took them to the ship. We were both surprised to find that the Captain was on board and had been for several weeks because we had been told he was on leave on the west coast. He seemed kind of peeved that we had gone to the XO instead of him until we told him that we had been told he was away on leave. In our discussion we made arrangements about the delivery of gasoline, loading of gear, rubber rafts, etc. We found they want a work order to install the refrigerator in the after hold. In Pearl Harbor work orders are required for everything except taking a leak on company time and I expect they'll change that too.

After spending the morning on the ship we wandered back into town and did some more casual shopping before heading back to the hotel to finish out the day working on packing lists.

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Jan. 14

Honolulu

Yesterday, during a brief stopover at the Bishop Museum, Max was told by one of the people there that 3 people from the museum's entomology department were going with us on the coming trip. It seems Preventive Medicine Unit #6 has been busily pulling strings behind the scenes again.

A little later in the day Max called the museum and found that only one person, a fellow he knows, is scheduled to go. I was under the impression that this sort of thing had been straightened out and we wouldn't be saddled with these people anymore. If they had tried to foist three people off that would have done it. One I can put up with -

three of them would have been entirely too much to stand. One person doesn't add a great deal of extra gear. Three people would have necessitated at least 1 extra boat load on and off of each island not to mention extra food problems.

At anyrate, I don't intend to spend one penny of project funds for gear for these people (or that person, whichever it turns out to be) unless ordered to do so. As I understood it the people from the Bishop Museum who went on the Marshall's trip still have not paid their expenses for food. They're so tight they squeak and are quick to take advantage of everything they can ^{get} as long as it doesn't cost them anything. As far as I'm concerned, any gear they don't bring along and find they need they'll just have to do without.

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Jan. 15

Honolulu

This morning Max and I headed for Pearl City bright and early. We spent the entire morning and part of the afternoon rooting around in the warehouse packing for the ATF and attempting to sort out other gear.

We pulled out 8 sleeping bags, that were getting mildewed, a max-min thermometer, a sling psychrometer, 8 headlights and a very expensive altimeter and took them out to the Ely's where they can be stored safely. Such gear shouldn't be left at Pearl City where it can't be stored either properly or safely.

By 2 p.m. we had done as much damage as we could do for one day - having gone through all of the Marshall's gear and then packed 5 trunks for the ATF trip. We are now in a position to complete the packing in a day or so and then start hauling gear onto the ship. As soon as Merrill gets here and we can rent a pickup truck we'll start hauling gear into the portable lab which is now on the ship.

The weather here is still uninspiring. It has rained every day since our arrival.

Since very little can be done on weekends we now have two days in which to rest up and plan our activities for next week.

The fact that Dr. Ely won't return until Wednesday afternoon distresses me a little. There

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Jan. 15

Honolulu

are certain things ^{we} can't do very well without his assistance. He didn't leave any word about having the rubber rafts checked out. Since we are taking two new ones there isn't much point in having them checked other than a perfunctory one by the ship's crew. As far as I'm concerned, the previous "checks" by the Pearl Harbor Boat Yard have been little more than a waste of good money.

January 16

Honolulu

Jan Ely called this morning after Max had left to go to the Bishop Museum to check on the entomologist who is supposed to go with us. She ^{didn't} wanted us to pick up a freezer chest from Pan Am.

Max returned around noon. Around 1 p.m. I took the car and went out to the airport to get the freezer. It just barely fit into the car. I took the lid off and then huffed and puffed until it finally ~~was~~ popped through the door. Since the freezer was so large I took it directly out to the Ely's where I again had quite a struggle getting it out of the car. It went in much easier than it came out.

Not much to do the rest of the afternoon except make ~~out~~ lists and do some planning.

~~At~~ In the evening we went to see Anne Bancroft put her way through the movie "The Pumpkin Eater." I got a headache by

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Jan. 16

Honolulu

sitting there all tensed up waiting for the pumpkin to appear - it never did which was a terrible disappointment for us both. A truly crummy flich in spite of all the raves it's received.

Jan. 17

Honolulu

Sacked out until 10 this morning just for kicks even though I woke up (one of many times) at 6. Nothing to do today.

We wandered down to the zoo and killed a couple of hema and then went down to the beach. Nothing exciting there either.

Returned to the hotel and did laundry

the rest of the afternoon. ~~Went~~
Picked Merrill up at 11:15 pm.

Jan. 18

Honolulu

Got up at 7:30 am. Took Merrill to the airport where he rented a $1\frac{1}{2}$ ton truck with a hydrolic lift. We then went to Pearl City and loaded on 3 rafts and the freezer which Merrill and Max took to the Hitchiti.

I drove on into town to pick up 50 lbs of dry ice for the bird shipment that has to be made soon. Was met in town by the truck and we all went out to Cly's to pass the shipment. We returned to town + picked up the car and followed Merrill to the airport. After shipping the frozen specimens we drove on + to the Hitchiti to confer with the XO for

Hochman, C.D.
1965

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Jan. 18

Honolulu

a few minutes in order to quiet his fears and curb his ever increasing panic.

When out to City, a Jan was frantically selling Pearl Harbor trying to find out when the 39 was coming in. She was getting two sets of answers. The unofficial word was that the 39 would be in late in the evening. At the same time, the official word, straight from the ship control center, was that it wouldn't be in until the 20th. Finally, at 5 she called us and said she had finally learned that the ship would be in to ~~the~~ Pearl City pier

VICTOR - 2 at 7:15. This pier was a good 19 miles from the hotel (right beside our warehouse 698).

The ship finally tied up at 8:35 but no one could get off of it until 9:15 or so because someone neglected to provide a gang plank. We just sat around and twiddled our thumbs while they improvised a gang plank out of 3 old boards and a net. Stunning moral efficiency.

We finally got back to the hotel at 10:30 p.m. Since we started out at 6:30 p.m. we did much better than we had expected. Normally, when you get there at a time like 7:15 the ship won't dock until 11:15 or so.

Hickson, C.D.
1965

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Jan. 19

Honolulu

Up at 8 am to eat breakfast and loaf around until 9:30 when Dr. Ely came in for a conference to see how far we had progressed in our preparations for the trip. Max and I conferred with him for about 3 hours during which we discussed a number of present and future plans.

Made two trips out to Ala Moana Shopping Center. One an emergency trip to get some gun bluing and other gear so Doyle Husted could fix up the old double-barrelled 16 gauge.

Jan. 20

Honolulu

Spent the better part of the morning out at Pearl City grubbing around with more packing and arranging.

Found some more gear that should be kept out at Ely's so we took it there and then spent the better part of the afternoon discussing ATF matters.

Jan. 21

Honolulu

Out to Pearl City bright and early. Then to Pearl Harbor to see the Hitchiti. Then to Pier 39 to see Dr. Ely - couldn't find him so returned to the Hitchiti to load gear on board. Spent the better part of the day on this task.

Stopped at Saepe for dry ice on the way home.

Hackman, C.D.
1965

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Jan 22

Honolulu

Stopped at Hawaiian Bakery Supply Co. for 100 pounds of Cornmeal on the way to the ship.

Then spent the rest of the day dragging gear around and distributing it in the lab and afterhold.

Jan. 23

Honolulu

Out to the ship bright and early for final preparations. Met Dr. Ely around 11am and followed him over to Ed. Smith's warehouse where we picked up the radios. After delivering the radios to the ship Max and I returned to the hotel to round up Dick Merrill and Ralph Kirkpatrick and then waited for Dr. Ely.

Shortly afternoon we all piled into the Falcon and drove across the island to Kaneohe Bay where the Univ. of Hawaii has its marine lab. There we were briefed on a special job we have to do this trip. This took the rest of the day.

Jan. 24.

Honolulu

Spent this day running all over doing a million and one last minute things. Out to the airport to pick up Woodward in the early evening - took him

directly to the ship. Huber finally showed up on the last flight of the evening - he was delayed and almost stranded by bad weather. Everyone was on board the ship and sacked out by 1 a.m. ready for the morning departure. This was by far the easiest trip I've had to prepare for this was primarily due to the ship's helpful attitude for which I'm duly thankful. Should be a good trip.

Hackman, C.D.
~~1964~~ 1965

Journal

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Jan. 25 - 31

At Sea - U.S.S. Hitchiti

Cleared the last channel buoy at the mouth of Pearl Harbor around 1030. Steamed steadily SW for the 6 day period. Seas relatively calm throughout the trip south. No notable occurrences.

Each day just like the one proceeding it - dull and boring. Spend part of each day on bird watches, part on preliminary paper work and planning and part on instructing the various personnel in the packing of their assigned boxes of gear.

The officers and crew of this ship seem very congenial and are interested in the work. Unlike all previous ships no one seems disturbed by the fact that he is making a two month "bird cruise". No doubt this view will have been somewhat altered before the trip is over.

Hackman, C.D.
1965

Journal

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February 1

Howland Island

Sighted the island visually around 0800 and landed in two boat loads between 0930 - 1015. The fact that the tide was at its lowest point, thus producing very small waves, kept us from being wiped out completely because our boat crew though no fault of its own is completely without surf experience. This will no doubt present some problems, possibly serious ones, when we reach such rough landings as those on Hull, McKean + Jarvis.

Setting up the camp took longer than usual because we're using brand new tents. All the ropes and attachments had to be laid out and adjusted.

Finally at 11 am we set out for a complete nest survey of the island. Blue-faced Boobies are at their low point in the breeding cycle. No birds on eggs were encountered until we reached the northern end of the island - then only a few were found. Nestlings and immatures are scattered here and there along the beach crest, with a few in the interior, around the entire island. No large day concentrations of adults are on the island at the present time although on the northern end and along the windward side several small groups, which will probably form the nucleus for this evening's clubs, were encountered.

Along the southern end of the island there are still about 1500 nestling Lesser Frigates - most nearly fledged. These constitute the remnants of the large colony (the eastern end) that was present during the October visit. Most of the birds in this section had either newly hatched chicks or were on eggs in October.

Hickman, C.D.

1965

February 1

Journal

14

Howland Island

In the air over the colony, at the present time, are between 8-10,000 immature and adult Lesser Frigates.

The big surprise this trip is the Sooty Tern population. On the southeastern shore, in the general vicinity of colonies on previous visits, is a two ~~stage~~ stage colony. On the northern edge of this colony are several scattered groups with nearly fledged young, these are the remnants of the colony that was present during the October 1964 visit. Along the edge of the nearly fledge groups is a new colony with birds on eggs.

A new Sooty Tern colony is located along the beach crest on the seaward (west) shore running from Itasca tower ~~west~~ to a point 200^{feet} south of the Amelia Earhart light house. The colony extends ~~inland~~ from the edge of the Lepturus on the beach inland for about 250 yards. A few Gray-backed Tern nests were found along the edges of this colony in the sparsely vegetated portions of the beach. This is the first time either species has nested at this location in our experience. Approximately 10,000 Sooty Terns and 60 Gray-backed Terns are ~~in~~ in the light house colony.

Brown Booby nests were, as usual, found almost exclusively on the beach crest on the southwest end of the island. The two exceptions were nests found on the beach crest on the southeast shore. Brown Booby nest totals: 17 nests with eggs, 16 nests with young (6 of which were large enough to band.) This strikes me as being quite an increase for this species over previous trips.

Hickman, C.D.
1965

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February 1

Howland Island

Blue-faced Booby totals:

1 nest with 1 egg

8 nests with 2 eggs

7 nests with small chicks

57 nests with large nestlings

19 Immature

On the beach crest on the ^{lee-}ward side Paul Woodward found a nesting Common Noddy Tern (Anous stolidus) and saw five or six adults in the vicinity. This is the first nesting record for this species in our experience. although 12 or so adults were present during ~~an~~ our October '64 stay.

A survey of the Greater Frigate and Red-footed Booby colony in the dead Cordia trees in the central depression of the island gives the following nesting totals: Greater Frigate: 63 birds (both sexes incubating) on 1 egg, 2 newly hatched chicks & 2 large nestlings. There were about 15 immatures sitting around and these were counted on our last visit or several that were checked had bands. One Greater Frigate egg that was cracked when the ~~Red~~ bird left the nest was fresh with no signs of blood vessels forming - barely incubated. Others, checked by looking at a certain angle in relation to the sun, were pinkish indicating that they too were fresh.

There were very few Red-footed Boobies in the nesting colony. Only 7 nests with eggs were found. Two nests containing vegetation (fresh tribulus) will probably contain eggs within the next several days. There were

Hackman, C.D.
1965

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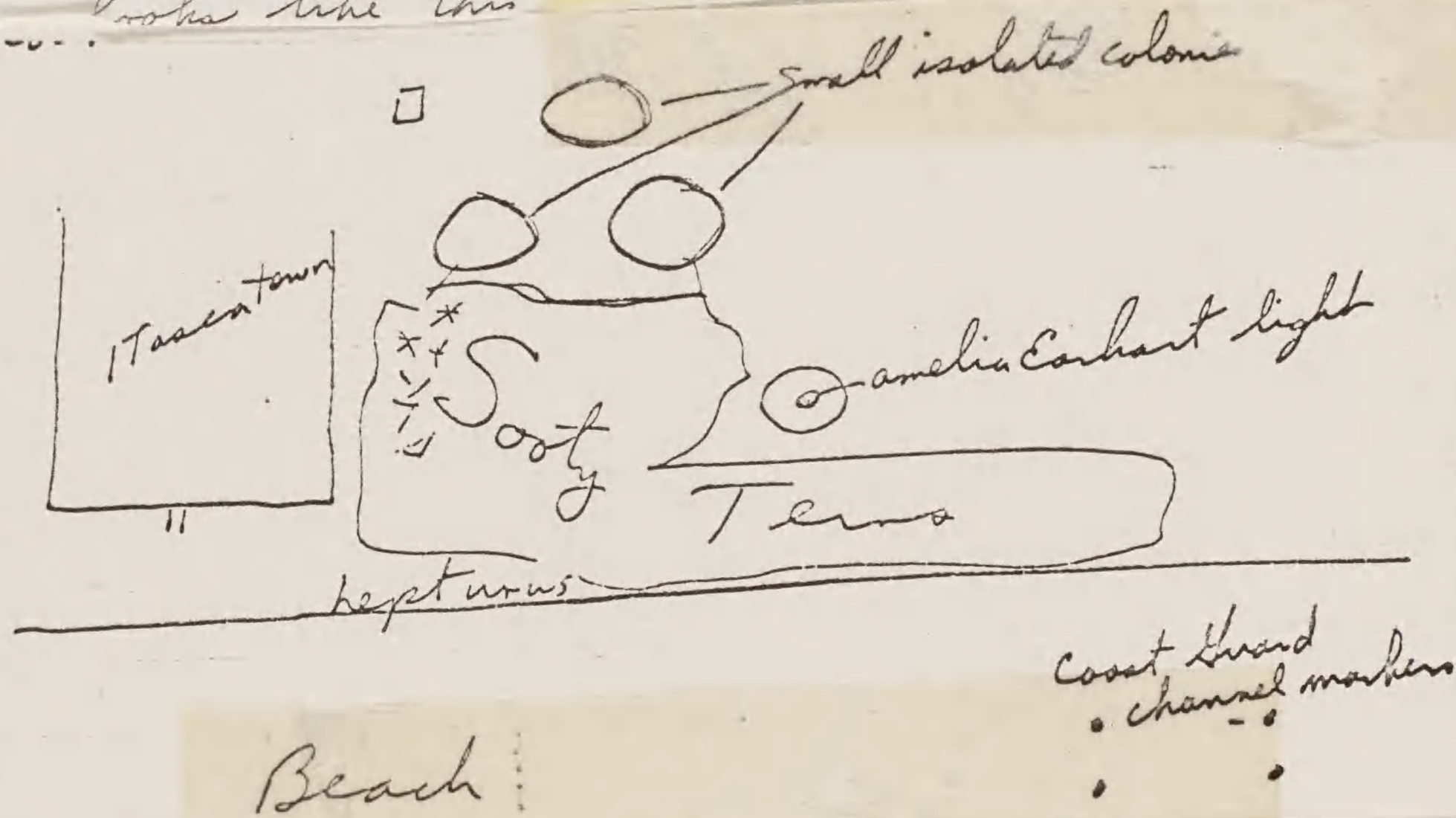
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February 1

Hawland Island

five immature Red-foots sitting around in the colony.
Two, still a little hesitant about leaving the vicinity
of their nests, were easily captured and banded.
Four incubating adults were also captured and their
band numbers recorded.

Late in the evening the Sooty Tern colony near
the Amelia Earhart light house began to expand
inland as more and more birds came into the island.
These birds are gathering in small, circular clearings
in the Tribulus. A few eggs are already being
laid in this section of the colony which at present
looks like this



Max, Dick & I began blood sampling of
Sooty Terns at dusk. The vacutainers did not
work very well on the Sooty Terns but provided
excellent results from the larger birds such as
Blue-faced Boobies and frigates. A total of 20
Sooty Terns ^{were} ~~were~~ sampled. The first 20 samples came

Hackman, C.D.
1965

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February 1

Howland Island

from Blue-faced Boobies and Sooty Frigate.

Larry + Ralph banded Sooty Terns and Paul worked on Blue-faced Boobies while we blood sampled. I joined them around 10 p.m. and helped them finish up their strings. At 12 midnight Larry quit with the terns and took a swing around the shoreline for some shorebird banding.

Nesting figures for Red-footed Booby:

7 birds on 1 egg

2 nests with fresh vegetation will probably have eggs within a few days

5 large nestlings (2 banded) - start here

Nesting figures for Sooty Frigatebird:

63 birds on 1 egg

2 birds with small chicks

2 birds with large nestlings

Harkman, C.D.
1965

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February 2

Howland Island

Paul Woodward made an early morning circuit of the island for a shorebird count.

Shorebird count:

Golden Plover 76

Ruddy Turnstone 79

Wandering Tattler 16

Bristle-Thighed Curlew - 10

Merill left at 0800 to centrifuge the blood samples taken last night. Again the ship crew made a very poor landing.

Around 0900, on the ebbing tide, Max and Larry assembled their gear and went out to look for zoanthids. Ralph and I cut plastic streamers for about 1 hour and then went down to the Great Frigatebird colony to try them out. The birds did not hold very well and we were only able to capture, band and wing tag 10 birds in the course of $1\frac{1}{2}$ hours. Not wanting to keep the birds off of their eggs too long ^(with the direct sunlight) we decided enough was enough and returned to camp. The color combination for this island was decided upon as Blue-Blue. This color doesn't show up well on birds in flight.

Around 2 p.m. Merrill came back in with 5 men from the ship who planned to change the batteries in the navigation lights and then practice landings through the surf. They sure could use the practice because they got creamed on each of six landing attempts in only moderate surf. The motor

Hackman, C.D.
1965

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February 2

Howland Island

The vegetation on Howland is healthy looking at present - fairly lush and green - which would seem to indicate recent rainfall has been more than adequate. The Tribulus is in full bloom as is the Boerhaavia. All other plant species appear to be ~~growing~~ ^{doing} well.

This afternoon we caught 50 Sooty Terns and checked them for wing molt. All birds were netted at the lighthouse tern colony.

~~After dark~~
Late in the afternoon Max sat on top of the lighthouse to watch for incoming Blue-faced Boobies. So few came into the island and formed such small clubs we decided to devote the total party effort to Sooty Tern banding. Each person did about 1500 birds. That is, each person with the exception of "Tiger" Huber. When I wandered back into camp ~~at~~ ^{around} 1245 a.m. Huber was still thrashing in the lighthouse colony. As I retired for the night he was heading for the windward shore colony with an enormous fist full of birds. His evening's total - 3,500. The overall total for the entire crew was 8,800 Sooty Terns. In addition to this were 38 ~~returns~~ returns on birds that were banded in July 1964. The best return of the evening, however, was an old Biological Survey band that Huber found on one of his Sooty Terns: 38-312056.

A red spray paint was used on this island.

Hackman, C.D.
1965

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February 2

Hawland Island

took quite a pounding during their numerous landing and takeoff attempts. 2 pieces were broken. Fortunately, neither of the two pieces were critical parts.

In going out to the ship, around 4 p.m., they picked the wrong time and hit the largest wave in the surf cycle and really got smeared. The boat took in so much water they were unable to paddle it through the last of the breakers.

In disgust they returned to shore, dumped the water out of the raft and dried the motor which had gotten dunked. After more fooling around they finally managed to go out through the surf without incident.

On the first day here one fellow was knocked out of the boat, when it broached in the surf, and landed on a sea urchin getting spines in his hand and foot. Fortunately, he hasn't had any after effects as yet.

The Hitchiti comes in closer to the reef than any ship in our experience. This afternoon it hung on the edge of the surf line with the bow no more than 300 feet from the first breaker. At this point it is so close it is possible to recognize people on the deck. This afternoon the boat ran through the surf and then ran around the stern of the Hitchiti and was moved to the ship in about 3 minutes flat.

Hackman, C.D.
1965

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February 1+2

Howland Island Summary

Blue-faced Booby - Small numbers present - 800 to 1000.

Only 3 or 4 small clubs observed along the windward shore. No clubs formed in the interior. Breeding status - inactive.

Red-footed Booby - Present in very small numbers.

Normal daytime population only 14 pair.

Roosting population 40-50. 7 nests with eggs.

Brown Booby - 33 nests. Roosting population - 60

Red-tailed Tropicbird - Uncommon at present. Only 2 nests with small young.

Greater Frigate - 80 pair in Cordia grove - The majority (63) on fresh eggs.

Lesser Frigate - 1500 nestlings still on ground but almost fledged. - remnants of the last breeding cycle. Between 8-10,000 adults and immatures utilizing the island at present.

Sooty Tern - 2 colonies actively nesting. The older colony, on the windward side contains about 3000 nearly fledged young and about 25,000+ birds on heavily incubated eggs. The newer colony, being expanded by new layings, at present, consists of 10-15,000. Total population 75,000+

Gray-backed Tern - 60+ nests along leeward shore on the beach rim.

Common Noddy - ~~4~~ one $\frac{3}{4}$ grown nestling, 6 adults.

Bristle-th. Curlew - 10

Wandering Tattler - 16

Ruddy Turnstone - 79

Golden Plover - 76

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Howland Island Summary

Celenterates
~~Celenterates~~ were collected along the west and south shores by Thompson and Huber.



No other collections were made.

Harker, C.D.
1965

Feb 1 + 2

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Howland Island Summary

	Banding						
	Adult	Subadult	Heath	Imm.	Unk.	Return	Recovery
Blue-f. Booby	49	13	54	40	7	179	2
Brown Booby	1		6	1			
Red-f. Booby			2			4	
Sooty Tern	11866					43	1
Sharp-b. Tern	36						
Common Noddy	2		1				
Great Frigate	10					9	1
Lesser Frigate						1	
Wandering Tattler	6						
Golden Plover	2						
○ R-t. Tropicbird	1		2				
	11973	13	65	41	7	236	4
Total					12096		

Hutchinson, C.D.
1965

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February 3

Baker Island

We departed from Howland with a minimum of difficulty, through 4-5 foot surf, at 0720 with the first boat load. The second boat load was delayed until 0815 because of trouble with the outboard motors.

Arrived off Baker at 1115 am and made the first landing at 1200. We were somewhat amazed to find Baker's surf extremely rough. The boat coxswain admitted he was afraid to start in so we circled around on the edge of the surf line looking for a spot. Finally, he just charged in and got up on top of about 8-9 foot wave and rode it in as it broke. He got a shade ahead of the wave, so that the front of the raft hung down about 2-3 feet lower than the stern which ~~could not~~ ^{could} have caused problems if we had hit a rock. Fortunately, everything worked out perfectly and we really barrelled into the beach. It was the longest, fastest and wildest ride I've ever had through the surf.

After unloading the raft we looked around for some sort of channel and could find no sign of one so we just sent the raft back out through the wild stuff. Just as they reached the last breaker on the surf line the motor stopped but they paddled wildly and got over the wave just as it broke passed them.

The second load made it to the beach with an easy landing after we had scouted around and ~~found~~ ^{found} a channel of sorts that caused the surf, in that section, to break softly and close in to shore.

Harkness, C. D.
1965

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February 3

Baker Island

The boat crew dispatched over the island to pick up some sections of aluminum pipe and to set the navigation lights up on the ends of the island while we set up camp. When they returned at 2 pm the surf was really booming in and there were no regular calm periods. The 10 of us then spent the next three hours trying to launch the raft. Everytime they'd just get started they'd run into an 8 or so foot wave just as it broke and would get smeared. Six attempts all ended the same way - with the raft full of water + powerless.

Each time we'd drag the raft back to the beach, detach the motor + gas can and then dump the water out.

An extremely strong undertow made the operation even more difficult. Finally, in desperation Merrill and I walked down to the south end to check surf conditions there and found them almost ideal. We then carried the raft, motor and gas about 800 yards across the island and made a successful launch at 6 p.m.

~~Now~~ After 4 solid hours of being pounded around by the surf while struggling with the raft we were all feeling slightly sub-par with various assortment of abrasions and aching muscles. The surf was so bad we decided to postpone blood sampling until tomorrow in order to eliminate 1 full series of boat runs.

The extremely bad surf conditions are being caused by a change in wind direction. Normally the wind is easterly throughout this area. At the present time, however, the wind is running out of the NW at about 15-20 mph. This means that, unless the

Hickman, C.D.
1965

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February 3

Baker Island

Wind shifts all of our normal landing areas will be windswept and will have bad surf conditions. This could prove to be especially hazardous on McKean Island with our inexperienced coxswains because the landing is onto a rock shelf through an area littered with coral heads. The McKean landing is a nasty one even under ideal conditions and just thinking about trying it under bad surf conditions scares all of us. So far we have been very lucky and haven't had any serious problems or injuries due to landings. If surf conditions continue as they have been someone is going to get creamed.

The motors have already taken a fearsome pounding. The one used today was under the water about 9 times during our many launching attempts. The shift assemblies and linkages have already been broken on both motors and various other cast parts have been broken off. In just two islands the motors have taken more of a beating than they received on the entire Oct - Nov trip. At the present rate, the motors won't survive the complete trip.

The entire ^{west} shoreline of Baker has changed drastically since our last visit. Normally, the water is deep right up to the shoreline and only 1 wave is encountered in landing. Now the shore has been swept back by the waves so that rock shelves have been exposed on the beach. There is no sign of a channel along the entire length of the west shore.

Hackman, C.D.
1965

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February 3

Baker Island

After launching the boat at 6 pm we split into two parties and ran a quick island survey. There isn't very much on the island at present. After dark most of us sacked out and turned to our aches and pains while only the ambitious went out to tackle the small blue-faced Booby club that is here getting 60 new birds and 52 returns.

February 4

Baker Island

Max got up early and made a shorebird count. Ralph began capturing and stuffing mice. I did some banding records + took some notes on various aspects of the island and the rest prattled around. Around 10 am Merrill walked around the island and mapped the changes in the beach and made a general survey. Woodward and Huber ate an early lunch and left to head Common Noddy Terns on the far side of the island.

The surf is still very high and steady along the west shore of the island. Heavy surf also on north and east shores.

It might be worth noting that the Hitchhiker radar has been inoperative since the 3rd day out of Pearl Harbor. This makes it necessary to place the navigation lights about 1 mile apart. The ship's crew has been taking care of this much to our great relief.

We spent most of the day wandering around looking but there just isn't much to see on this island at the present time.

Hackman, C.D.
1964

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February 4

Baker Island

- The vegetation on this island is in poor condition compared to that on Howland. Only Portulaca and Boerhaavia are green and healthy in appearance. Both Digitaria and Lepturus are mostly brown with only a few green leaves. Such species as Mimosa, Setaria, Cynodon, the sedge and the ~~for~~ Sandburr grass are almost completely burned back. Most of the Sida has died back and only a few plants of this species are in bloom and healthy in appearance. Tribulus, which is located in patches in the center toward the east side of the island looks very healthy and is in full bloom. The two beach species: Triumfetta and Spornea appear to be in fair condition. The Spornea is blooming in some areas.

- Last night we had a new moon. Just this little sliver cast enough light to make the shorebirds jumpy and impossible to capture. On each succeeding night the moon will become brighter and will set 1 hour later until, by the time we hit Edenburg, the Blue-faced Boobies will be as hard as the dickens to capture. Somehow we always manage to hit a bright moon on the most populous Blue-faced Booby islands.

This evening the moon set at 8:45 and we all went out to blood sample Blue-faced Boobies and to do what little banding there is to do here. After banding & sampling we returned to camp and ~~the moon set at 8:45 and we all went out to blood sample Blue-faced Boobies and to do what little banding there is to do here. After banding & sampling we returned to camp and~~

Hackman, C.D.
1965

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February 4

Baker Island

sacked out - 11:30

30 Blue-faced Boobies were blood sampled,
13 banded and 42 were returned. The club
contained about 150 birds the majority of which
had been banded and marked the night before.
Most of these birds flushed quickly.

February 5

Baker Island

We got up at 6 ~~am~~ broke camp and
began carrying the gear 7 mile across the island to
the south shore where the surf was better. All gear
was on the south beach by 7:15. The first boat
load took off at 7:30 without much difficulty.
The second boat got creamed on coming in and
we had to dump all of the water out before it could
be loaded. In going out we missed a wave on our
count and it peaked up to about 9 feet and broke
on us about 15 feet from shore. The raft reared
up and came down on top of us upside down. Gear
was floating all over the beach with people running
around frantically grabbing it. I grabbed one
ammunition box just as it sank but ~~couldn't~~ didn't
have time to move before the undertow pulled my feet
out from under me just before another 9 foot wave
broke on top of me. The box was so heavy I could
hardly move it since I was hanging on to a water cooler
too. Each big wave that came in shoved me a few
feet further up the beach until finally, after about
five of them, I was far enough up so that I could
cling the Arctic cooler high and dry and then use

Hackman, C.D.
1965

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February 5

Baker Island

both hands for the water filled box.

Fortunately, no one was hurt in this episode - at least not seriously. I lost skin off of 1 knuckle, jammed another and got a big bruise and cut on my right knee. Everyone picked up a bruise or two along with a few scratches here and there. The motor took the worst beating of all because it lost its cover and was half filled with sand. Needless to say it wouldn't start.

We loaded the boat back up and then waited and watched the surf very carefully this time.

We passed up several short calms but finally found one during which we were able to paddle out past the surf line and out of danger.

In the meantime the ship launched the other raft which came in and gave us a tow.

Shortly after coming on board the ship began its initiation for the equator crossing. Max hadn't planned on going through but made the mistake of going down to take pictures - he went through first and got off easy. Ralph went through third or fourth. This ship gave a very easy initiation - nothing elaborate such as the Lakelma or the Lipian on the second cruise.

Hickman, C. J.
1965

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Feb 3 + 4

Baker Island Summary

○ Blue-faced Booby - only 16 nests on the island (4 with 1 egg, 10 with 2 eggs). About 4 immatures (all banded) were observed on the island. Two small clubs formed on the south shore of the island late in the evening with 150 and 50 birds, respectively. 2 nestlings were banded in addition to 69 others. Returns totaled 94.

Brown Booby - 8 birds roosting with the larger Blue-faced Booby club.

Sooty Tern - small flocks in vicinity of the island throughout the stay. None on the island.

○ Gray-backed Tern - 2 nests found inland near old plane wrecks. 12 birds seen on the ground along the south shore were not checked for nesting activity.

Common Noddy - 377 nests in lagoon (35 with nestlings, 342 with eggs) 35 nestlings were banded, 2 birds were recovered. Estimated 800+ adults.

Greater Frigatebird - 9 immatures and females in vicinity of the island throughout the stay. None seen roosting.

Bristle-thighed Curlew - 2 seen on Feb 3

Wandering Tattler - 10 on Feb 4

○ Ruddy Turnstone - 113 on Feb 4

Golden Plover - 7 on Feb. 4

Hochman, C.D.
1965

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Feb. 3 + 4

Baker Island Summary

○ Coelenterate collections were attempted along the south shore but were unsuccessful. The heavy surf around most of the island precluded searching anywhere but along the south shore but the water here was full of sard and visibility was poor.

3 Mice (*mus musculus*) were collected and put up as study skins.

30 blood samples were taken from Blue-faced Boobies.

No other collections were made.

○ Banding totals:

	Adult	Subadult	Nestling	?	Return	Recovery
Blue-f. Booby	52 52	14	2	7	94	—
Common Noddy	35					2
	100 87	14	2	7	94	2

Hackman, C.D.
1964

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February 6

McKean Island

Sighted the island around 8:45 and moved in close to take a look. Much to our relief, the wind had shifted back to the east during the night and was blowing around 15-25 mph. The landing didn't look bad so we loaded up the raft and changed in. As it turned out, the landing we were the most worried about was the easiest one we've had this trip. There was hardly a ripple as we came in.

The island survey was completed by 1 p.m. Very few nesting Blue-faced Boobies on this island too. There are large numbers of Sooty Terns, Common Noddy Terns and Gray-backed Terns nesting at present. The large Lesser Frigate colony is still fairly intact but most of the birds are ~~now~~ now capable of short flights.

Around 2 p.m. Max, Larry + Dick worked out on the reef with face masks and snorkels to ~~first~~ look for coelenterates. Ralph + I worked over 4 or 5 species for ectoparasites. Paul banded Common Noddy nestlings, Hubert worked Gray-backed Terns and Dick ~~and~~ and Max worked on Fairy Terns.

~~After~~ Around 4:30 - 5:15 we had an extended rain shower that curtailed activities until after dark.

After dark Max + Dick took blood sample while the rest banded. It was slow going in the thick Sida but the results were good. About 2,500 Sooty Terns were banded and 97 returns were

Wachman, C.D.
1965

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February 6

McKean Island

Obtained.

The Sooty Terns, Great + Lesser Frigates, Fairy Terns, Red-footed Boobies and Blue-faced Boobies are all disgorging fresh squid during the middle part of the day when disturbed. These squid range in size from $1\frac{1}{2}$ inches to 6 inches.

Packed out at 2:45 a.m.

February 7

McKean Island

Up at 7:30 a.m. after a very restless night. Last night when I returned to the tent (around midnight) I discovered a horde of ticks crawling into the tent. The miserable things were trooping over the threshold at a rate of about 100 per minute. The floor of the tent was literally alive with them. I got busy with paint brush and jars and collected 3 jars full. By that time I was covered with ticks from head to toe and had that horrible creepy-crawly feeling. We swept the ticks out of the tent, sprayed the entrance with ^{"OFF"} and then sacked out. About every 10 or 15 minutes another tick would thunder across my arm or leg and would require a smack or two so I didn't sleep too well. — none of us did, for that matter.

I spent the early part of the morning doing banding records while Larry + Paul (Dressed in their finest pairs of jockey shorts) made a shooting count. Merrill went out to the ship to work the blood samples. Max went out and banded Fairy Terns and Ralph collected ~~Bulwer's~~ ^{Bulwer's} Petrels.

Hickman, C.D.
1965

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February 7

McKean Island

samples.

Later Ralph and I caught and recorded ~~some~~ primary molt on 50 Sooty Terns and then finished the string off.

Between one and three p.m. we sat around and roasted because there was hardly a cloud in the sky and the wind ~~had~~ slacked off. Around 3:20 p.m. Ralph and I took a bunch of white plastic strips and some 7A bands and went out to wing mark some Great Frigatebirds. They were extremely jumpy so only 21 birds were wing tagged. We used a white-white combination which shows up fairly well.

The first Audubon's Shearwaters and White-thr Storm Petrels came into the island at 1800.

Everyone went out banding at sunset but the moon was high in the sky at full dark and all had varying degrees of success (or difficulty) in capturing birds. The Sooty Terns in the Sida were the only ones that could be captured in number so all of the team banded worked in that small area. The moon didn't set until 11:30 p.m.

When we returned to the tents the ticks were horrible both inside and out. We don't know how we'll get them out of the tents but we're certainly going to make an all out effort to eradicate them. The tent that Max, Ralph and I sleep in is simply full of gorged ticks. Little spots of blood are all over the floor where ticks that have bitten one person or another have been smashed. Things were so bad this

Hackman, C.D.
1965

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February 7

McKean Island

evening that Ralph and Max packed up their cots and went down to the high water line on the beach - both stating ~~they~~ that they didn't give a damn if waves washed over them all night ~~long~~ just as long as there weren't any ticks. Since I had to write up all of the banding records I decided to stay in the tent after making a few preparations.

First I carefully brushed the floor + walls of the tent, then my cot was gone over thoroughly. With a can of insecticide I sprayed all around the cot and then, for good measure, sprayed the legs of the cot extra well. Chances are it will all wear off around 5 a.m. and I'll be eaten alive.

Just another of the many wonders and joys of ATF life - couldn't live without them.

Finally sacked out at 3 a.m.

February 8

McKean Island

It will be a relief to get off of this island for a change. The ticks have just about driven us all crazy. We're all sporting numerous tick bites on arms, legs, hands, necks + all other points (both significant + otherwise).

The surf is picking up a little this morning but nothing serious because there is a long calm periodically. (We got creamed on the way out!) Ralph fell out of the raft and I had to hang on to him and finally managed to pull him in after much struggling. We got smeared by six large waves before getting out into open water. Departed at 0800.

Hutchinson, C. D.
1965

Journal

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Feb. 6 + 7 McKean Island Summary

Spray paint color - green.

Coccolenterate collections were made on the reef by Thompson, Hiker + Merrill. Same species encountered as that from Howland.

100 blood samples taken as follows:
30 Blue-f. Booby, 20 Sooty Tern, 20 Heaters
Frigate, 20 Common Noddy, 10 Audubon's
Shearwater.

50 Sooty Terns were captured and
checked for wing moult.

Cito parasites were collected from
Gray-b. Tern nestlings, Heaters Frigate,
Hawaiian Noddy Tern and Audubon's
Shearwater. Fairy Tern were checked but
yielded no parasites.

21 Heaters Frigatebirds were wing tagged
with a white streamer on each wing. This pattern
shows up conspicuously on birds in flight.

Berlitz samples taken from H. Frigate nest,
Common Noddy nest, Hawaiian Noddy roost, Audubon's
Shearwater nest, Brown Booby nest, Wedge-tailed
Shearwater nest.

4 Common Noddy Terns were collected.

A Shorebird count was made: Sooty-th. Gull 42,
Golden Plover 48, Ruddy Turnstone, 286 W. Tattler 9.

Hackman, C.D.
1965

Journal

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February 6+7

McKean Island Summary

Red-tailed Tropicbird - a few birds sitting in previously used nest sites. Total of 7 active nests - 3 with nestlings. Population - 16 adults, 3 nestlings.
12 banded

Wedge-tailed Shearwater - ~~400~~ 500 in nesting colony. Some small nestlings. Banded ~~27~~ 29, 29 returns.

Andubon's Shearwater - 2,000. Some nests with eggs + small chicks. ~~305~~ adults + 1 nestling banded. 45 returns.

Bulwer's Petrel - ~~400~~ 30⁺. Inactive breeding status. 3 adults banded, 1 large nestling banded.

Wh-thr. Storm Petrel - estimated 500 on island at night. ~~300 banded~~, 1 nest with egg found. Counting. ~~3 banded Feb. 7~~
166 banded, 2 returns

Blue-faced Booby - 3 large clubs and several small concentrations - 1000+ birds. Banded 108, 159 returns, 2 recoveries. 35 nests found with nestlings or immatures.
see Band Book

Brown Booby - 4 nesting pair (3 with 2 eggs, 1 with 1 egg) 30 roosting at night. Banded 5, 2 returns.

Red-footed Booby - ~~see band book~~ relatively inactive and scarce at present - 3 nests with eggs, 2 nests with small young. 2 nests with large young, 8 nests with fledged birds. No roost club observed on Feb. 6. Small roost club of 30-35 birds on Feb. 7. Banded 6, 7 returns + 2 recoveries. Total population - 50

Hackman, C. D.
1965

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Feb. 6 + 7

McKean Island Summary

Common Noddy - 5,000 - actively nesting. Large concentrations of $\frac{1}{2}$ to $\frac{3}{4}$ grown young along west, north and east shores in stone walls and in extensive areas of coral rubble. Banded 44 adults, 356 nestlings, 5 returns.

Great Frigate - 107 nests with 1 egg, 1 with 2 eggs, 5 with small chicks, 46 immatures still on nests from last breeding cycle. About 500 adults + immatures. Banded 20 adults, 6 returns, 2 recoveries.

Lesser Frigate - ~~10,000~~ 10,000 fledged + nearly fledged nestlings still on ground in colony along east shore. Very small mortality resulted from heavy banding of these nestlings in October. Most of the ~~lost~~^{lost} recovered birds were taken from birds whose tarsus was badly swollen and infected. About half of the ~~birds~~ immatures checked still showed signs of swollen tarsi but the swelling appears to be subsiding. The majority appear healthy and should leave their nests within the next several weeks.

Total Population - 30,000

Bristle-th. Curlew - 42, 14 banded

Wandering Tattler - 9, 8 banded

Ruddy Turnstone - 286, 4 banded

Golden Plover - 48, 3 banded

Hackman CD
1965

Journal

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Feb. 6 + 7

McKean Island Summary

Sooty Tern - total population - 250,000+, colonies located mostly on west shore - the largest is in the Sida thicket at the site of the old guano camp. Eggs and young in all stages throughout the island. 7095 banded, 192 returns, 2 recoveries

Gray-backed Tern - 2,000 mostly with fledged or nearly fledged young along north and south shores of the lagoon in extensive patches of coral rubble. 100 adults, 23 nestlings banded, 1 return.

Fairy Tern - down in abundance with no more than 500 utilizing island at present. Most of these are on eggs. A few small chicks. 97 banded, 10 returns

Blue Gray Noddy Tern - a few nests found.
2500 \pm , 17 banded, 2 returns

Hawaiian Noddy Tern - down in abundance, not actively nesting at present. Two nearly fledged young. About 150 birds including solitary roosters. 50 banded (2 nestlings), 2 returns.

21. Jackson, C.D.
1965

Feb. 6 + 7

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McKean Island Summary

Bandwig

[illegible]

Journal

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February 9

Hull Island

We arrived off Hull at 0700 and started loading the boats for a landing. At 0810 we pushed off in two boat loads and headed for the channel. The surf didn't look bad until we got close in to the island then it looked really bad. Waves were breaking across the channel - 8 to 10 footers - making it impassable. Big surf was crashing in along the entire length of the island. Around 9 a.m., after watching us move in and out hesitantly, the ship flew the recall flag and we had to return. We unloaded the rafts, hauled them aboard and ~~then~~ cruised around the island to the village.

At 11 a.m. we threw a few items of gear into the raft and went into the village to make a survey of this area. Max and Paul went to the lagoon to look for coelenterates. Dick Merrill took the shotgun and went down the island to collect a few birds and I roamed around looking for insects to add to the collections already taken from here.

We were entertaining the idea of hauling a raft and some gear to the lagoon and motoring down to the ~~last~~ Sooty Tern colony on the far end of the island. Shortly after arriving, however, there was a loud explosion as the entire side of the raft blew up. This effectively cancelled any plans we might have made.

So we spent several hours on poking around looking for Coelenterates, insects and birds. Found none worth mentioning so left the island around 2 p.m.

Aschmann, C.D.
1965

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February 9

Hull Island Summary

Due to a 10 foot wave crossing the boat channel and large breakers along the entire length of the island no landing was attempted at the bird colony. An afternoon landing was made near the old village with the intention of portaging to the lagoon and going down to the bird colony. The raft blew up and cancelled these plans so we returned to the ship.

The lagoon was surveyed for coelenterates but none were found - it was mainly sterile. The ocean side was too rough for diving in the vicinity of the ~~lagoon~~ village.

Because the raft blew up all plans were cancelled and we returned to the ship and moved on to Birnie Island. The extra day gained from this island will be added on to Enderbury Island.

No banding was done.

Species Summary

Shearwater - 26 adults and immatures over the island.

Sooty Tern - estimated from the ship, thus, a poor estimate - probably more than 35000 in the colony on the north end of the island.

Common Noddy - 15 birds

Fairy Tern - 15 birds

Crested Tern - 4 birds

Wandering Tattler - 2 birds

Golden Plover - 10 birds, 1 collected

Ruddy Turnstone - 35 birds, 4 collected.

Hackman, C.D.
1965

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February 9

Hull Island

Four of the sailors paddled what was left of the deflated raft out through the surf. They caught about 12 big waves, several almost dumped them, before they got passed the surf line.

The ship lay off Hull until 1800 and then departed for Birnie Island.

February 10

Birnie Island

Arrived off the island at 0800 and made the two landings through 1 foot surf - ideal surf conditions.

After setting up camp Max, Larry + Dick checked the reef for coelenterates and found one variety to be abundant. The rest of us worked around camp collecting rats, doing banding records, etc.

Around 3 p.m. we discovered that one of the navigation lights had lost all of its battery charge so we shot off a flare and contacted the ship. Within 30 minutes a new battery was brought ashore and the lights were then set up on the north and south ends of the island.

The rest of the day was spent on an island survey. During the survey a dead turtle was found on the east beach crest. A wedge-tailed shearwater was seen flying over the southern portion of the island during the survey.

Since the moon was so bright we sacked out until 2:00 a.m. before attempting to do any banding. ~~There we~~
~~didn't complete banding until dawn.~~

Hickman, C.D.
1965

Journal

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February 11

Birnie Island

We returned to camp at dawn after getting up at 2 a.m. Ralph + I blood sampled Blue-f. Boobies while the rest banded. After dawn broke we collected some rats for Ralph.

After breakfast Dick went out to the ship, Max + Larry dove for coelenterates on the edge of the reef, Ralph worked on his rats and I made a shorebird count.

There has been a tremendous crash in the rat population on Birnie. The species here (Rattus exulans) was so numerous on the previous visit (Nov. 64) it was devastating the island's vegetation cover. In November, at night, rats were encountered every 5 or 6 feet over the entire island. They were so abundant that one person, with a minimum of effort, could capture 35 or 40 per hour by hand. Last night rats were encountered every 50-90 feet and it took three people over 35 minutes to capture 17.

As the direct result of this decline in the rat population the vegetation is much improved. Previously, the rats had eaten all flowering parts and new growth off of the Portulaca and Boerhaavia. Presently, both have quite a bit of new growth showing and both are flowering.

We were surprised to find a fairly large concentration of Gray-backed Terns nesting on the island in several colonies. Their success can also, probably, be attributed to the low rat population.

Hackman, C.D.
1965

Journal

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February 11

Birnie Island

The surf has been ideal since our arrival at this island. Hopefully, we won't encounter any more bad surf conditions on the remainder of this trip. We've already had more rough landings than on the three previous trips combined. I know I've had more than enough pounding around and being clamped.

It has been extremely hot on the last several islands. During the day there is hardly a breath of air stirring and the air just hangs. The sun is really hot - Larry + Max both have badly sunburned lips that are cracked and bleeding a great deal of the time. Max is also peeling and blistering constantly - he's now down to the 3rd layer in some places.

There have been about 10 or 15 rays working off of the edge of the surf for the past day or so. Can't tell exactly what they're doing but there is a lot of splashing going on.

February 12

Enderbury Island

We departed from Birnie at 0700 and had no difficulty with the surf. (the first island this trip at which there wasn't at least one complete wipeout during a landing or departure)

Sighted Enderbury at 11 a.m. and landed the two shore parties at 1 p.m. Camp was quickly established and a survey of the south end started. Ended up the survey by banding Red-footed Boobies.

Hackman, C. D.
1965

Journal

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Feb. 10 + 11

Binnie Island Summary

- Celerate collections were made by skin diving in the shallow portions of the reef. Thus far, only one type has been located and collected from all of the islands. We suspect that the other varieties desired ~~desired~~ are to be found only in deeper water.

- ~~And~~ Gray-backed Terns were found nesting successfully at several locations on the island, much to our surprise. Both Wedge-tailed Shearwaters and Audubon's Shearwaters were banded and collected on the island this trip. Fairy Terns and Red-tailed Tropicbirds were scarce during this visit. The Fairy Terns seemed warier than is usual for this species and, as the result, few were banded. Most birds of this species refused to come into netting range (hand nets).

Bright moonlight for all but 2 hours each night greatly hindered the banding efforts on this island. All species were nervous and quick to take flight.

○ The island's rat population has declined drastically from that which attained during our October - November 1964 trip. The population has been reduced to about $1/20$ th of its previous high level. This reduction has had a marked influence upon the state of the island's vegetation and, we think, ~~upon~~ ~~the~~ is probably responsible for the large breeding colony of Gray-backed Terns.

19 rats were collected, measured + checked for breeding status.

Hackman C.D.
1965

Journal ✓ Check 48
Band Book

Feb. 10+11 Birnie Island Summary

Wedge-tailed Shearwater - 6 birds offshore in the evenings.
1 seen over the island. Club of 11 on island - 5 banded, 1 collected

Audubon's Shearwater - 2 banded, 1 collected, 1 return

Red-tailed Tropicbird - 12 nests (12 with eggs). Estimated
50 birds. 13 banded, 3 returns

Blue-faced Booby - 30 blood sampled. 50 banded,
299 returns, 5 recovery.

Brown Booby - 70-75 birds roosting on east and
south shore. 28 banded, 18 returns.

Sooty Tern - small groups on the ground mingled with
Gray-backed Terns. Estimated 2000.

Gray-backed Tern - colonies with eggs and small
chicks along west and south shores. Estimated
2,000. 85 banded

Fairy Tern - Estimated 300 mostly on eggs 34 banded, 7 returns

Blue Gray Noddy - Estimated 100. 1 banded

Hawaiian Noddy Tern - Estimated 1000 roosting on
island along north shore. 22 banded, 1 return

Common Noddy Tern - Estimated 2500 roosting on ³⁹²
island at night. A few nests with eggs. 6 returns

Crested Tern - 3 birds seen flying off west shore.

Lesser Frigatebird - 16 (3 male, 6 female, 7 immatures)
over island.

Greater Frigatebird - 5 females

Bristle-thighed Curlew - 1 near lagoon.

Hochman, C.D.
1965

Journal

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Feb. 10+11

Birnie Island Summary

Wandering Tattler - 5 on an island circuit, 3 banded

Ruddy Turnstone - 24 counted on an island circuit,
8 banded.

Golden Plover - 6 counted on an island circuit,
1 banded

Johnson, C.D.
1965

General

50

Feb 10 + 11

Barding - Birnie Island

[illegible]

Hockman, C.D.
1965

Journal

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Feb. 12

Orderbury Island

nestlings and adults in the Cordia groves.

At 6 p.m. we all went down to the south end of the island to a small Sooty Tern colony and blood sampled 100 birds in order to obtain 50 samples. Two people netted the birds and three people sampled.

During the first portion of the island survey two dead birds were found on which the breasts had been eaten off. No other parts of these two birds had been touched. This looks suspiciously like the work of a cat.

While banding the Red-foots we saw an adult return to the nest, almost immediately after being disturbed, and kill its chick. The bird landed on the nest stabbed the chick several times, rapidly, and then threw it out of the nest. This is the first time I've witnessed this type of behavior even though we customarily band in this colony on each trip. The chick that was killed was no more than three or four days old.

There has been a noticeable drop in the numbers of Blue-faced Boobies encountered thus far this trip. The chicks are much smaller than usual and very few birds are nesting. The Fairy Tern population on McKean Island was also lower than normal.

At dusk we watched for shearwaters but none were seen.

Sacked out at 9:30 planning to get up when the moon goes down to complete the blood sampling. Tonight we'll only have about 1 hour of darkness before sunrise. Tomorrow night, there won't be any. Banding large numbers of birds on this island will be next to impossible.

Hackman, C.D.
1965

Journal

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February 12 Enderbury Island

because of this full moon.

Tropicbirds are apparently just beginning a new cycle. We have encountered them in very small numbers throughout the trip. Very few nestlings have been found to date.

Last night on Birnie Island Larry banded an Audubon's Shearwater, caught one that was banded and brought one in to be collected. Later in the night he encountered a club of 11 Wedge-tailed Shearwaters and succeeded in capturing 6 which he brought back to camp. Five of these birds were banded and one was collected.

We have decided we could most profitably spend the extra day, acquired because we were unable to land + operate successfully on Hull Island, here on Enderbury. This is especially true with the moon rapidly approaching the full stage. We probably won't be able to accomplish anymore in the five nights ~~than~~ we could in two completely dark ~~one~~ ones. The full moon makes life very difficult for one and all.

February 13 Enderbury Island

We got up at 4:30 just as the moon set and worked in three teams in order to blood sample 25 Sooty Frigates and 25 Blue-faced Boobies. The sampling took us until dawn because the birds were both jumpy and well dispersed. Hitting them immediately after the moon sets doesn't help matters much because the birds don't have any time to settle down.

Tonight will be almost impossible because

Hackman, C.D.
1965

Journal

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February 13

Endersbury Island

The moon will be with us until dawn. Crows, we'll give the boobies a try tonight.

Spent the early part of the morning cutting wing tags for Great Frigatebirds. This afternoon or early tonight we'll attempt to put on a few of them.

At 0800 Merrill went out to the ship to run blood samples. Huber had already been gone for about 30 minutes on a shorebird count. Around 0830 Paul went down to the lagoon to look for shorebirds and to check nesting conditions there.

Paul returned around 9:15, picked up a string of #5 birds and went down the west shore looking for

Red-tailed Tropicbirds. The rest of us walked to the frigate colony on the north end and then on to the guano pile.

The Great Frigatebirds are on fresh eggs in the main colony and in the smaller colonies that are located in the interior along the south end of the lagoon. There are few nesting frigatebirds on the island. Red-footed Boobies are on eggs, at present, but a large number also have small to medium sized nestlings.

Between the guano pile and the north end of the island we found two large Sooty Tern colonies. The colonies extend all the way to the north shore of the island. The middle of the three colonies is on large nestlings while the other two have eggs and a few small chicks.

A few Hawaiian Noddy Terns were nesting in the far (north) patch of Clusia. One $\frac{1}{2}$ grown nestling and 12 eggs were found.

Hackman, C.D.
1965

February 13

Journal

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Crocker Island

At 5 p.m. we packed up some gear and headed toward the Sooty Tern colonies on the north end of the island. By using nets we were able to band 600 adults before dark. After dark we tried picking birds up off of their nests but the moon was far too bright so we returned to our nets and did an additional 300 birds. It wasn't long before we realized that only one small part of the colony near the guano heap was actually on eggs. Most of the birds were on freshly hatched chicks which rapidly fell prey to the very ^{abundant} ~~common~~ Hermit crabs. Once this was discovered we quickly finished up the loose birds and moved ^{out} ~~and~~ of the colony completely.

After finishing up the birds we went to the Cordia grove beside the guano heap and blood sampled 25 Red-footed Boobies. Paul Woodward and Ralph Kirkpatrick did most of this sampling. We took the blood samples only to familiarize these two people with the procedures involved as well as to give them the feel of the instruments used. Four birds were killed by the sampling. Normally we can take 8 cc from Red-foots without losing a bird.

At dusk tonight the Hawaiian Noddy Terns came in off of the ocean in large, low-flying flocks numbering between 50 and 500 birds. Flocks were still coming in long after the last light of the sun had faded. Attempts to band the flocks ~~unsuccessfully~~ miserably. With the moon so bright it was

Hickman, C.D.
1965

Journal

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February 13

Enderbury Island

impossible to approach the roost without flushing one and all. We succeeded only in capturing one bird. Perhaps, if we had waited for several hours, until the birds had had an opportunity to settle down we would have captured more of them. Just our presence in the vicinity, while banding the Sooty Terns, was enough to drive most of them away from the roost. If we ever succeed in visiting this island when there is ^{no} moon we'll be able to band large numbers of this species - otherwise it is virtually impossible to capture more than a few.

February 14

Enderbury Island

Max went out to the ship to centrifuge the blood at 0800. I rented the crew out and put Larry on skinning out five specimens. The rest of us began putting colored plastic streamers on Greater Frigatebirds - slow work at best. At noon we quit to eat lunch and rest up a bit before going back out.

The ship's shore party came in at 1330 and we knocked off work and joined them. The afternoons are entirely too hot for banding birds sitting on eggs or small chicks.

Max informed me, upon his return, that the Captain had told him the ship was on alert because of the present situation in Viet Nam and might be ordered to return to Pearl Harbor in the very near future. I hope this doesn't happen before we reach Pago Pago because our mail will be there waiting for us.

Hackman, C.D.
1965

Journal

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February 14

Enderbury Island

From what Max said the order to return to Pearl Harbor may come at any moment - we hope not!

For the second day in a row the ship let a duty section come to shore for a beach party. Twenty of them arrived around noon armed with bags for sea-shells, fish rods and 5 cases of beer and 1 case of root beer. By 4:15, when they departed, they were well pickled and boisterous. Fortunately, there is no surf to speak of - if there had been they would have been creamed.

In the evening, aft. it started to cool down again, Max and I went to the small Sooty Tern colony on the south end and banded 99 birds. Fifty of these were checked for wing moult.

On the way back we stopped and checked a Brown Booby nest in which there were two small nestlings. The smallest of the two nestlings had been pushed out of the nest. Since none of us had ever seen how the smaller of the two chicks was removed we decided to mess around a little. The small chick was replaced in the nest and this drew an immediate reaction from the other. By shoving, grabbing a flap of skin and flipping and by dragging, whichever method seemed to provide the best results, the larger chick promptly ejected the smaller one. It took little more than a minute for the small bird to be completely ejected from the nest. The small chick was too weak to walk ~~back~~ or scramble back into the nest so its fate is simply to sit outside of the nest until it dies of exposure and or

Hickman, C.D.
1965

Journal

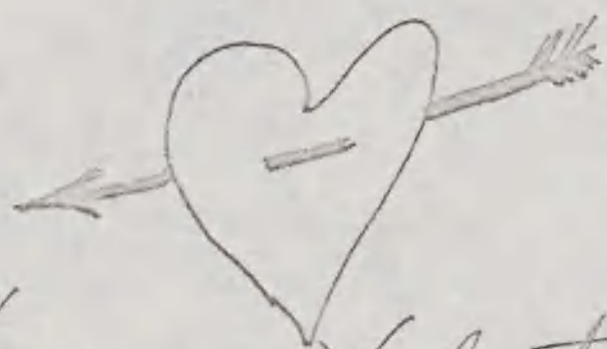
57

February 14 Endebury Island
starvation on both.

- Our curiosity now fully aroused (for a change) we took the large bird out of the nest and replaced it with the small, weak one. The large chick immediately began protesting by clucking loudly and persistently, but it made no attempt to move. When the parent returned to the nest it settled down on the small chick and completely ignored the larger, more healthy one outside of the nest. When the large chick saw the parent settle down on the nest it began dragging and flapping itself forward ~~until~~ until, finally, it succeeded in getting back into the nest and under the parent. ~~It was not until~~
- But we found the small bird again ~~outside~~ ~~of the nest~~.

After dark we split into two groups ~~two~~^{to} and Red-footed Boobies and Sooty Terns - one group going up to the guano pile on the north end and the other out to the clumps of Cordia in the south central portion of the island.

The moon is completely full tonight so bending should be lots of fun and full of laughs.



Happsy Valentine's Day!

Sacked out at midnight.

Hackman, C.D.
1965

Journal

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February 15

Endsberry Island

- Got up at 0700 and walked up to the large frigate colony in the Messerschmidia at the north end of the island. In the next two and one half hours we banded over 200 Lesser Frigates and put plastic streamers on each wing. The color pattern for this island is: Right wing - Blue, left wing - white.

- On the way back Larry and I waded through the lagoon looking for Common Noddy and Gray-backed Tern nests. We didn't find any Gray-backed Tern nests on the islets in the lagoon but there were a few Common Noddys eggs and nestlings.

It was really ~~hot~~ blistering hot this afternoon so we didn't do anything between 1 and 4 p.m. The ship's third duty section came in for its beach party at 1 p.m. and stayed until 4:30 p.m.

At 5 p.m. we walked down to the two small Sooty Tern colonies and managed to net 300 birds before dark. This colony has extremely small young and a number of eggs that are pipped.

- Tonight we'll attempt to work the Blue-faced Boobies but don't expect to have very much success. Last night we caught a few but had no luck at all when we tried to work groups containing more than ~~one~~ two ~~birds~~ or three birds.

This evening we looked at the nest from which we had evicted the large Brown Booby chick last night. Both chicks were being brooded by the parent ~~now~~ much to our surprise.

Hackberry, C.D.
1965

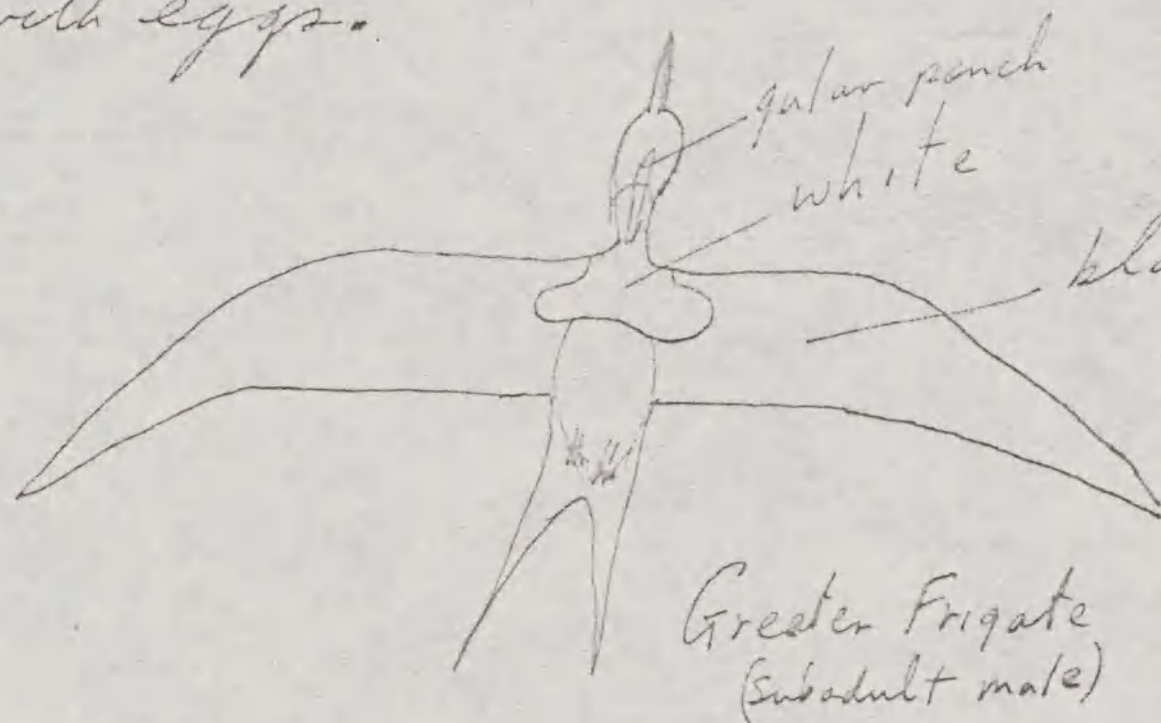
Journal

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February 15

Enderbury Island

While banding and working Greater Frigates we have come across a number of young males incubating eggs. These birds, which could probably be considered as subadults, still have some of the immature plumage on the throat and breast. The gular pouch is developed but not to the full extent of the ~~full~~ adult males. This pouch is also a paler red than that of the adult bird. At least 15 of these young males were observed on nests with eggs.



Normal pattern
for adult ♂
on southern
islands.

Greater Frigate
(Subadult male)

~~After dark~~
After dark we went out in the full moonlight and attempted to work the Blue-faced Boobies. We got 5 birds out of the first club and 3 out of the second. It was fruitless from the start. After 2 hours of thrashing around we had managed to capture and band less than 20 ~~birds~~ birds. We finally ended up with a total of 88 returns for the evening.

Hashman, C.D.
1965

Journal

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February 16

Enderbury Island

Up at 8 a.m. with not a great deal to do since we've already thrashed through the nesting colonies of all species present several times. A fine day stay is entirely too long ~~than~~ for an island where there is a full moon. You just can't accomplish a great deal except upset the birds. Banding is almost impossible and thoroughly frustrating. If we had hit this island when it was in full darkness we could easily have banded 30,000 birds. As it is we have expended enough effort to have done so but have only banded about 3,000.

The lagoon is still only about $\frac{1}{3}$ full of water. In most places the water depth is only about 6 inches.

The island's vegetation is in fair shape. Flowering species include: Portulaca, Sesuvium, Sida and Triumfetta. The Crotonia ~~sp.~~, Lepturus and Digitaria, apparently suffering from recent drought, are just now starting to send up some new leaves. Several patches of Tribulus that were found looked healthy but were not blooming. The Sporox, in the rock piles, is in full bloom as is the Cordia in the grove in the interior of the island. The large clump of Messerschmidia on the east shore of the island is in excellent condition and blooming. Boerhaavia is also in full bloom.

Tonight we'll have about $\frac{1}{2}$ hour between the sunset and the moonrise but this won't be sufficient time for us to accomplish much of anything. Throughout our entire stay we've had moonlight for the whole night.

Tomorrow we'll leave here to spend one day on Canton Island before heading for Pago Pago.

Hackman, C.D.
1965

Journal

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February 16

Endebury Island

Before the moon came up we dashed around and managed to band 15 Blue-footed Boobies and captured 101 returns. This was accomplished in about 35-40 minutes. As soon as the moon came up the birds became impossible to capture.

While banding Red-footed Boobies in the Cordia grove near the guano heap we found a few ticks. There did not appear to be a large population. Amazingly enough, we here found no ticks in either of the two small Sooty Tern colonies on the south end of the island nor here we found any ticks on the birds that were handled on the north end of the island.

It would be interesting to see if the tick population in the Cordia grove (which is right beside one of the tern colonies) suddenly increases in number as more and more chicks are hatched in the tern colony.

Hackman, C.D.
1965

Journal

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February 12-17

Endeavour Island Summary

Coelenterate collections were made on the reef during low tide. Very few specimens were located. The reef is essentially dead ^{in the depths} at which we worked.

The full moon during this island stay made banding difficult for most species. Blue-faced Boobies and Sooty Terns were virtually impossible to capture except with hand nets. Hawaiian Noddy Terns, though abundant, were impossible to approach.

The ship held beach beer parties for the three duty sections in the afternoons of these consecutive days. The behavior of the crew was excellent and no problems developed even though a number of them were thoroughly intoxicated by the time they departed.

Close to 300 Great Frigatebirds were banded and marked with plastic streamers on each wing. This type of marking requires a great deal of time - much more than is available on most trip schedules. The fact that we had a five day stay on this island, because of our inability to land on Hull Island, permitted us to work the frigates. It takes about two minutes ~~or~~ or more to capture, band and wing tag ~~to~~ each bird.

Five days on this island during the period of the full moon proved to be too long a stay. During the heat of the day very little banding was attempted because most species, such as Sooty Terns, were on freshly hatched chicks. At night the Sooty Terns were almost impossible to band.

Hackman, C.D.
1965

Journal

63

February 12-16

Enderbury Island Summary

Audubon's Shearwater - 4 birds seen (1 collected, 2 banded)
on guano pile on north end of island.

Wedge-tailed Shearwater - 1 seen offshore at dusk on
February 16.

Red-tailed Tropicbird - 7 nests (6 with eggs). 23 banded
1 return. Estimated - 50+ birds. Counting and
inspecting nest sites.

Blue-faced Booby - 6 nests with eggs, 12 nests with
young. 575 banded, 279 returns, 1 recovery.
800 estimated population.

Brown Booby - 355 banded, 34 returns, 32 nests
with eggs, 9 nests with young. Estimated 150+.

Red-footed Booby - 185 nests with eggs, 150 nests with
nestlings. 369 banded, 248 returns. Estimated
1200.

Sooty Tern - estimated 85,000+ in 5 colonies all with
freshly hatched chicks and eggs. 2 collected. 4351
banded, 10 returns

Grey-backed Tern - 500 along east shore of lagoon. a few
on eggs.

Common Noddy - 200 birds roosting and nesting on islets in
the lagoon. 26 nests with eggs, 11 with small chicks,
7 with large nestlings.

Hawaiian Noddy Tern - estimated 4,000 roosting in Cordia
near guano heap. 15 nests with eggs, 1 small nestling +
14 adults banded.

Hickson, C.P.
1965

Journal

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Feb. 12-16

Endebury Island Summary

Blue Grey Noddy Tern - A few seen roosting on Scaevola.
Estimated - 15-20.

Fairy Tern - 5 seen at one time near Cordia grove in the interior of the island.

Greater Frigatebird - 1310 nests with eggs, 21 nests with small nestlings. Many eggs pipped. Estimated 6,000 adults and immatures. 293 banded and marked with plastic streamers on each wing (Blue on right wing and white on left.) 2 band returns (also marked with streamers.)

Lesser Frigatebird - Not nesting at present. Estimated 500 adults and immatures using island at present.

Ruddy Turnstone - 553 counted on an island circuit

Wandering Tattler - 61 counted on an island circuit.

Bristle-th. Curlew - 44 counted on an island circuit

Golden Plover - 78 counted on an island circuit

Sanderling - 6 counted on an island circuit.

Banding

	Adult	Subadult	Nestling	Imm.	Unk.	Return	Recovery	Specimen
Blue-faced Booby	25	2	14	14	5	279	1	
Brown Booby	23	1	3	2	1	34		
Red-footed Booby	275		77	20		248		4
Greater Frigatebird	293					2		
Red-tailed Tropicbird	22		1			1		
Sooty Tern	1552		2799			10		
Hawaiian Noddy	14		1					
Audubon's Shearwater	2							1
Total	2211	2	2895	36	1	574	1+4	
			2895			574	5144	

Hackman, C.D.
1965

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February 21-25

Pago Pago, Amer. Samoa

- Arrived at 0900 on Sunday, February 21 which was one day before we were expected by the people in officialdom - even though they had received and acknowledged several messages from the ship giving the 21st as the date.

The first part of the stay was devoted to trip records and reports. The last two days were given over to correspondence, reading and lots of ice cream.

As usual, nothing of an exciting nature occurred during our stay.

- Departed for Fakaofo Island in the Tokelau Group at 0900 on February 25..... back to work!

Observations

Reef Heron - 15 reported roosting on the small island named Chinaman's Hat. 1 collected.

Blue Gray Noddy Tern -

Common Noddy Tern - Present in small numbers on small islands along coast line.

- Greater Frigatebird - 3 over Pago Pago Harbor - Feb. 24.

Fairy Tern - present - no estimates

White-t. Tropicbird - present - no estimates

Wedge-t. Shearwater - 15 seen offshore on Feb. 21

Red-f. Booby - 45 offshore Feb. 21.

Anderson's Shearwater - 1 seen offshore on Feb. 21.
about 1 mile off shore of Tutuila.

Hachman, C.D.
1955

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March 5

U.S.S. Hilehiti, enroute to Jarvis Is.

Got up at 0630 after spending 15 straight hours in the sack. The rest was a real help because I've only averaged about 4 hours per night for the past 6 or 7 days and was feeling slightly beat.

Spent today cataloging insects and doing paper-work. A total of 245 insect collections were made in the Tokelans during our brief visits which probably only scratches the surface. On Atafu Island, the leaf debris was simply crawling with free-living mites most of which were extremely small. I was surprised not to have found any earwigs in the Tokelans but the entomologist from the Bishop said he found 1 specimen on one of the islands. Earwigs are a very common species on all the other islands we work so it is something of a surprise to find them very scarce in the Tokelans.

The ship had a complete power failure this morning that lasted about five minutes. No damage was done but it caused a bit of excitement and helped break the normally dull ship's routine.

March 6

Enroute to Jarvis Is.

A totally unimaging day by any set of standards. Rained gear for Jarvis Island while Hube + Woodward skinned birds from the Tokelans. Since we expect to sight Jarvis around noon the fun will start again soon enough.

Haskins, C.D.
1965

Journal

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March 7

Enroute to Jarvis Is.

Our originally scheduled time of arrival has been set back 3-4 hours because of repeated engine failures. Certain critical ~~parts~~ engine parts are apparently in sad shape and there are few spare parts available. The engines have been changed over 4 or 5 times today already because of the constant breakdowns. We have also been going straight into the wind and the sea which has caused some lost time. Arrival time is now somewhat uncertain but hopefully it will be early enough for us to get on the island today.

Chalk up another stunning triumph for the super-expensive but gloriously thorough and efficient Pearl Harbor shipyard crews. After the last trip I had requested that the door on the lab be rehung. Work orders were sent in and a crew worked on the door - judging from past experiences it was probably a full 12 man crew and the job only took three days. Apparently, they tightened up the screws and smeared nutty-patty here and there and called it another job well done. As the result the door fell off! The idiots didn't do a thing to the section that needed the attention tightened screws just don't hold a thing when the metal all around them is completely broken off - as this was. The ship's crew obligingly drilled 2 holes in the lab and rehanging the door in about 20 minutes - without a work order, without charge - and most important - properly!

Hutchinson, C.D.
1965

Journal

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March 7

Jarvis Island

Finally sighted the island at 3:45 pm about 4 hours late than originally scheduled. This delay was due partly to the engine troubles, partly to the wind and waves and partly to a strong current. We ate dinner ~~at~~ at 4:30 and then quickly loaded the boats and headed in for shore.

The twin channels looked fairly rough but not too bad from the ship. When we got in close they looked bad. Lucky for us, there was a long interval between waves as well as a calm period that lasted from $1\frac{1}{2}$ to $2\frac{1}{2}$ minutes. The biggest shock was the shoreline.

On our two previous visits here the twin channels and the beach have been solid sand. This time a high rock shelf was exposed on the shoreline of both channels. There has apparently been a great deal of rough surf along the east shore of this island during the past three months. The landing, never an easy one, is now definitely dangerous because of the exposed rocks on the shore.

Since it was late in the evening and the surf was running up to 10-12 feet in the channels we sent both boat crews out in one boat. This was also done because one of the boats is missing two of its cross panels which makes it unstable and definitely unsafe in rough surf. We waited until there was a calm period and sent them on their way and they had no trouble getting out of the channel even though the motor failed to start.

Hickman, C.D.
1965

March 7

Journal

Jervis Island

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Since the surf is so bad we have decided to eliminate as many boat runs as possible. Fortunately, the navigation lights aren't needed so boat runs aren't mandatory. We'll probably blood sample on the last night and hope that the surf has abated by the time we are ready to leave. We're all very happy that this will be the last surf island on this trip - we've all been smeared enough already to make this quite a memorable trip.

Again, as on all the other islands, the Blue-faced Booby population is ~~and~~ well below that of previous visits. Only five ~~clubs~~^{clubs}, with about 200 birds each, were roosting on this island this evening. None of these clubs held too well even after the new moon had set and it was pitch dark.

To our great disappointment there is no active Sooty Tern colony at present although there are thousands in the air over the island. Max found an abandoned tern colony in the interior near the guano diggings that was full of rotten eggs. ~~Since~~ Since we arrived so late it was impossible to check the previous tern colony site for indications of breeding success or failure.

Only a few cats were seen during the first evenings' banding but these were extremely wary and impossible to approach. Two kittens were located in a den in the guano diggings and both were dispatched. No other cats were killed although an effort was made.

Heikonen, C.D.
1965

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March 7

Jarvis Island

The vegetation on the island is still in a sorry state. The only green visible is that of the Sesuvium that is located in the interior. Everything else, with the exception of scanty clumps of Tribulus and Baerhaavia, is burned off and brown. The Tribulus spines, thoroughly dried out and very light in weight, are maddening. One can't walk more than five feet in some areas without getting several down the back of each shoe which can be somewhat painful at times.

Everywhere one looks are large numbers of dead Dermostid beetles. This island ~~was~~ had a large thriving Dermostid population on our previous visits here. These large numbers were made possible by the large numbers of birds killed by the cats. Now with the cats nearly killed off and the terrible carnage reduced there is nothing to support such an enormous population so, apparently, they are now dying in large numbers.

We found several very large soft-bodied ticks crawling about on the floor of the house this evening. These ticks are 4 times the size of the ones encountered on McKeen Island. One and all, we're thankful that they aren't as plentiful as they were on McKeen. An effort will be made to make a live collection during our four nights here. This is the first time we have observed ticks on this island. - (I think.)

Sacked out at 0315.

Harleman, C.D.
1965

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March 8

Jarvis Island

Back up at 0650 for a radio check with the ship during which I requested that no boat run be attempted because of surf conditions. Since the captain wasn't up yet the ship wouldn't commit itself on the matter so I had to stand by on the radio until 0710. At that time they request another radio check for 1200 hours for a further report on the surf.

My sore toe felt miserable in my regular tennis shoes so I borrowed a pair of ~~Paul~~ Paul Woodwards which are $3\frac{1}{2}$ sizes larger. Since the entire side was out of these creakers walking was something less than a delight because of the million and one Tribulus spines that litter the ground. My other ~~cuts~~ cuts and infections are showing signs of healing but this process is extremely slow. Both Max and I are attempting to keep these cuts open and draining so that they will heal completely rather than ulcerate deeply as our other cuts did. The ulcerated cuts can be and are extremely painful and sensitive at times. Hopefully, another week will see the last of the worst ones we have.

Operating under the ~~vain~~ ^{vain} assumption that all growing boys need at least 6 hours of sleep, I sacked back out at 0718 - finally getting up at 10:30 am. We hung around camp doing odds and ends until the 1200 radio check and then went out to make a nesting survey of the island. I didn't get too far because of my aching toe so I puttered around with ectoparasites and Red-tailed Tropicbirds along the leeward side to the northend and to the guano dippings in the interior.

Hackman, C.D.
1965

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March 8

Jamies Island

Further comments on vegetation: Abutilon spp. is almost completely gone and is represented only by one scrappy plant that is in bloom near the lighthouse. Cleome species, found on the February 1964 visit, is still not in evidence ^{anywhere} in the interior. Aside from the Sesuvium in the interior the only plants that are in good condition are those along the beach crest. These species, which are all in bloom, include: Boerhaavia (large variety), both species of Portulaca, Tribulus and Sida. Only in a few places has any healthy looking Eragrostis been found. Tribulus is thriving in the old guano diggings where it is in thick green mats covering sections up to 100 square feet.

Tropicbirds and all other species, except the L. (night) + Brown Booby, are quite inactive. Only three tropicbird nests (1 egg, 2 large nestlings) were found although about 20 birds are engaged in aerial courting near the lighthouse. Red-f. Boobies and Blue-faced Boobies are at a low point in their breeding cycles.

Last night was a rather strange one insofar as club behavior was concerned. All of the Blue-faced Booby clubs bolted rapidly even though we didn't disturb them until an hour after the new moon had set. It was quite dark but still they bolted. Four different people worked the five clubs all with the same result. Paradoxically, the two Red-footed Booby clubs ~~and~~ that were worked held beautifully. Normally, Red-foots panic and disperse at the

Hackworth, C.D.
1965

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March 8 Jarvis Island

Slightest disturbance even on the darkest of nights. We have no explanation for the complete reversal in club habits of these two species. It is predictable, however, that, since the Blue-faced Boobies were so jumpy on the first encounter, they will be ~~so~~ ^{virtually} impossible to do anything with by the fourth night here. This coupled with the small population that is present doesn't speak too well for our chances of banding large numbers of Blue-faced Boobies during this visit.

The enormous cloud of Sooty Terns that has been hanging over the island - often at extreme heights - shows some signs of coming down to the ground. On several occasions today part of the flock came ~~to~~ ^{noisily} down and hovered a few feet from the ground. Just at dusk a large number of birds settled on the ground momentarily before taking flight again. This is typical pre-nesting behavior ~~on these dry islands~~ on these dry islands. While on the subject of Sooty Terns, the nesting colony that was just starting during our November visit (in the interior on the windward half) as well as a more recent colony up near the guano diggings failed. Large numbers of broken and rotted eggs litter the ground in both areas.

Signs of extremely heavy surf in the recent past are abundant along the entire length of the leeward shore. The beach drift line extends up onto the beach crest. Many of the rocks previously used by Red-tailed Tropicbirds for nesting sites are now almost completely buried by sand. Along the beach near the two channels a

Hackman, C.D.
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March 8

Jarvis Island

solid shelf of rock that extends for 40 feet above the low water mark has been completely exposed which makes landings a little hazardous. Near the lighthouse was a pile of about 100 coconuts and there ~~was~~ ^{was} heavy beach erosion ~~and~~ ^{plus} some signs that water had run over the beach crest there.

At least two litters of ^{two} kittens ^{each} have been located and killed and 5 adults have been killed. In walking around the island last night I saw only two cats in ~~6~~ ^{6 1/2} hours. There are ~~still~~ apparently still enough cats present to effect the breeding success of Sooty Terns on this island.

The surf abated today so we plan to blood sample tonight. Last night there was a wind shift back to the normal easterly trades which has helped smooth the seas, and thus the surf, out quite a bit. If the wind and seas hold we shouldn't have any serious problems with the surf.

After dark I roamed around in rubbish piles and in nearby vegetation for concentrations of ticks. About 1 1/2 hours of searching, some of which was spent at the Lesser Frigate colony, failed to turn up anything. Two live ticks were found inside the ~~ant~~ building later on.

We all sacked out until 10:30 p.m. and then got up to do some blood sampling. Getting 100 samples (25 Red-foot, 25 Sooty, 25 Lesser Frigate and 25 Blue-f. Booby) took all of us until 1 a.m. Since it was threatening rain again (we had a hard but brief shower earlier in the evening)

Harkness, C.D.
1965

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March 8

Jarvis Island

We returned to camp and sacked out.

Because my toe hurts so bad in my shoes I have borrowed a pair of Ralph's which are 2 sizes larger. Originally, I was wearing a ~~pair~~^{one} of Paul's which are $3\frac{1}{2}$ sizes larger. The net result has been a stiffening up of my ankle from walking differently so that now into a toss up as to which feels worse - the toe or the ankle. Life gets quite miserable out here if you do anything to hurt your feet. Cuts rapidly become painful, slow healing infections. The simple act of wearing shoes is sufficient irritation to keep most of the infections from healing. Once you get an infection you get caught in the vicious circle in which you spend half of your time treating your wounds and the other half in irritating them and making them worse.

The bird situation here is bad. Only three clubs formed up tonight - amounting to about 700 birds (as compared to 5 clubs for 1200 birds last night.) The beach crest on the leeward side is almost completely devoid of Blue-faced Boobies tonight. I'm beginning to wonder where they all are because we've seen very few Blue-faced at sea this trip. They must have all found an island somewhere else where they're safe from our midnight assaults.

Hackman, C.D.
1965

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March 9

Jarvis Island

Merrill went out on a blood run at 0800. The boat had no difficulty whatever because there is now a calm period lasting up to five minutes.

When we blood sampled the Lesser Frigatebirds last night we found that most had very badly infected tarsus due to improper banding. On the last trip the Army photographer banded several ~~Lesser~~ Frigatebirds on this island and apparently set the bands improperly on the tarsus. Most of these birds should be away from their nests and gone ~~now~~ by now but all they do is sit around ~~and~~ and sulk. Most of them are very light in weight and heavily soiled from their own droppings. I doubt that more than half will survive.

Apparently, Jarvis is on the upswing again insofar as rainfall is concerned. We have had frequent, but brief showers, throughout our stay. As the result the vegetation along the beach crest is beginning to show some signs of renewed vigor.

Huber shot one cat last night - a lactating female.

Last night Huber complained of headache and nausea. He said his tongue was swollen at the base ~~and~~ and that the ~~lymph~~ lymph glands in his groin were swollen. On top of this he has an odd cough so at 1300 we sent him to the ship to be checked out by the medic. This may be due to the bad infection he has on his leg, or ~~may~~ ~~stem~~ from something entirely different.

Harbison, C.D.
1965

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March 3

Jarvis Island

Max and I ~~both~~ both still have a number of bad coral infections on our feet and legs. Some of the soreness is slowly going out of mine and they are beginning to heal from the bottom up. I have also been having some troubles with the lymph glands in my groin. This is nothing new, however, since on every trip, once I acquired some coral infections, the same ~~thing~~ thing has happened. My infections this time have been more painful, extensive and slow healing than on previous trips. I have just about reached the point from which I'll be awfully damned glad when this trip is over. I'm getting tired of sore feet, sore legs and sore groin because all combine to make life miserable.

Aside from walking around observing and taking notes there isn't much here to keep us busy during the daylight hours. Especially since most of us have our delightful little aches and pains. There are no tropicbirds to speak of. The frigates are quite exposed and very spooky so we're not going to attempt to wing tag them. Almost no boobies are on the island during the day and small birds are nonexistent. The surf is far too rough to look for coelenterates on this island. So we sit around trying to look busy all day long.

The boat brought Merrill back in at 1300 and went out with Huber. Larry didn't look too red hot when they left. The boat had no trouble at all with the surf.

Hackman, C.D.
1965

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March 8

Jarvis Island

Paul made a shorebird count this morning (dressed as usual in sneakers + jockey shorts) and found only two species present: Golden Plover (25) and Wandering Tattler (8). This is an extremely low shorebird total for an island of this size. It is very interesting to note that there are no Ruddy Turnstones or Bristle-thighed Curlews present. On previous visits the shorebird totals have been quite respectable. Paul noted that a few of the Golden Plovers were nearly in full breeding plumage. (I wonder if high water in the recent past accounts for this low total?) Cat hunting during the day produced only one more cat - another lactating female.

Sacked out early in the evening and got up at 10:30 to go out bending. I hobbled until 4 a.m. and managed to get 99 birds with my blinding footsore and blazing speed. By 4 a.m. I had one solid cramp in my left foot so I hobbled back to the house and called it a night. The toe is feeling better with each passing day. Tonight I covered about $3\frac{1}{2}$ miles before the toe acted up too much.

The lymph gland on my left side has lost all of its soreness and swelling. Now the one on my right side is the only one that is bothering me. The net result seems to be a general overall feeling of tiredness and total lack of energy. In spite of the fact that I had about 9 hours of sleep today I was worn out by 12 a.m. If it doesn't improve tomorrow I'll go out to the ship and take the rest cure with Bert Huber who has been restricted to the ship for two days by the medicine.

Hackman, C.D.
1965

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March 9

Jarvis Island

Huber was running a temperature and had an infection in one of his lymph glands as the medic grounded him.

Saw only one cat during my rounds tonight. As soon as my light hit it the cat turned and ran.

This afternoon Al Samuelson found and collected a few ticks for me. These came from a clump of *Lepturus*. These ticks seem to be most prevalent on Red-footed Booby chicks and nests.

Sacked out at 0500 just at false dawn.

March 10

Jarvis Island

Last night the Blue-faced Boobies ~~were~~ ^{were not} very common on the south end of the island. At 5 p.m. a binocular count turned up only 150 birds on the south end from a point even with the house to the southern beach crest. Only two clubs formed up later in the evening.

Red-footed Boobies formed up in two very large clubs in the interior on the south end and again held pretty tight. The Red-foot clubs ^{held} better than the Blue-faced for some reason or other. This behavior is contrary to all previous experiences with these two species. Solitary Blue-faced Boobies, although widely scattered, have been more profitable to work than the large clubs thus far this visit.

With the ~~running~~ cats as wary as they are it isn't too likely that we'll be able to wipe out the remaining ones on this visit. At night they run as soon as a light hits them even if they're $\frac{1}{4}$ mile away from the light. These cats are almost impossible to catch up with because they are in such excellent condition.

Harkness, C. D.
1965

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7 March 10

Jervis Island

We awoke this morning to the delightfully inspiring sound of enormous surf pounding upon the shore. We jumped out of bed, ran to the door and sure enough: there it was - enormous surf! The miserable wind has shifted back to the NE and is running about 25 mph. Even though the sea is calm on this side of the island there is a tremendous ground swell and this is really pounding on the shore. On the southwest end of the island there is at least a 25 foot wave breaking and leaning beautiful rooster tails as it roars in. ~~If~~ If the surf looks like this tomorrow we won't be going anywhere. The waves are breaking in the mouth of the channel and since there is no interval whatsoever the channel is literally one big mass of boiling water. This surf makes ~~the water look like~~ the rough stuff we hit on Baker look like a dead calm.

Spent the better part of the day rooting around through Lepturus for live ticks. By pulling up entire plants and then pounding them on a flat rock I managed to collect about 80 ticks in 3 hours of actual searching. Once placed in a jar and moistened the ticks become quite active.

A short while ago several waves threw water up the beach to within 100 feet of the house. These waves are already coming up about 150 feet of the beach and it is still low tide!

The ship made the 1800 radio check and announced bravely that the boat would be in at 0700 to pick us up. Max just laughed at them. We will wait until tomorrow morning

Hackman, C.D.
1965

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March 10

Jarvis Island

to see what the surf is like before deciding what to do. If it is still as rough as it is now we certainly don't intend to try going through it. The waves are breaking 10-15 feet high at the mouth of the channel 125 feet out from shore and since there is no long interval where waves will get wiped out for certain.

We can either wait the surf out here on this island to the detriment of the schedule or we can haul all of our gear clean across the island to a channel that is calm (but full of 7 foot Gray Sclerites). This would mean carrying all of the gear about $1\frac{3}{4}$ miles but, all things considered, that would probably be better than waiting for the surf on this ~~side~~ side to abate.

The really odd thing about this ~~surf~~ surf is that on the leeward side, where it is the worst, the sea looks perfectly calm. There hasn't been a whitecap seen all day long. There must be a big storm somewhere to the north and west of here that is generating this surf. It will be interesting to check the weather reports if and when we get back to the ships. (We checked later - no storms!)

Sacked out until 12:30 am and then banded until dawn.

March 11

Jarvis Island

There were four big slabs of Blue-faced Boobies on the island when we started out banding. About 1:30 am it started to blow real hard and then the rain came down pretty heavy. We thought this would be like all of the other brief showers that had occurred during our stay so we kept on banding for a while. After about 15

Hickman, C.D.
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March 11

Jarvis Island

minutes of very heavy rain and strong winds we realized it wasn't going to stop for a while. By this time our headlamp bands were stretched and our lights were all sitting on the bridges of our noses and we were completely soaked and chilled. The rain lasted for about 45 minutes and must have amounted to $\frac{1}{2}$ inch or so.

We returned to camp, changed clothes, repaired our headlamps and went out again only to find that the Blue-faced chubs were extremely nervous and quick to take flight. Even so, we thrashed around in the chubs until false dawn when everything became impossible to capture - due partly to another rain shower.

In the first light of dawn Dick and I went over to have a look at the "shark" channel on the east end of the island. It was loaded with Black-finned Sharks and was almost completely calm - except for some chop offshore it looked very good. When we returned to camp at 0600 the surf was still piling into the west shore 10-15 feet high.

Then, using a sled Dick had improvised, we hauled our raft and all of the gear over to the Southwest shore $\frac{1}{4}$ mile, loaded the raft up and then began pulling it along the south shore hunting for a channel. We couldn't find any channels that looked good. The entire bottom along the south shore was covered with algae and was slippery. Since there was no good footing we were afraid we couldn't hold the raft in one of the channels in the face of the 8-10 foot waves that were pounding in. So we kept on going around to the east shore - about 2 miles - to the shark channel.

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March 11

Jarvis Island

that had been calm earlier in the morning. It took us until 9:30 am to reach the east shore.

The ship sent the other boat in to meet us as soon as we cleared the channel. Since we had a makeshift rig we had all sorts of problems: 1) the raft with the two seat sections missing, 2) only 2 paddles (and 3 boards we picked up for that purpose) and 3) a partly deflated boat and 4) 1 broken strap on the motor mount which had been replaced by several pieces of nylon cord.

So in spite of this we charged out into the channel started the motor and started moving. At the mouth of the channel the motor mount gave way (helped by the fact that the boat was partly deflated) and the motor was dislodged completely. Everyone started paddling frantically with board and paddle until the other boat came in and threw us a line and started towing. Just as it looked like we were clear and had made a clean getaway a 10 or so foot wave roared in from nowhere and almost upset both boats. Fortunately, the wave wasn't breaking or we would have had it. At this point we were about 250 yards offshore directly upwind from some very big surf. If we had lost the motor or had been dumped at this point we would have had it.

Eventually we got out to the ship and were taken aboard safely. At that we all heaved a sigh of relief.

The rubber raft we used was completely demolished by our trip around the edge of the reef. It had about 25 holes in its bottom - some as large as a man's head.

After a morning like this we were all completely exhausted so it didn't take us very long to sack out.

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March 12

Motu Upua, Christmas Island

Arrived off of London at 0800 and dropped the anchor shortly afterward. Max, Paul and Al Samuelson loaded their gear into the motor whaleboat and headed for the main landing. The rest of us loaded our gear into the rubber raft and headed for Motu Upua, arriving there at 11:30 am.

We ate lunch and then conducted an island survey. Very few Red-tailed Tropicbirds were present. Phoenix Island Petrels were flying over the island in large numbers in the middle part of the day - estimated 2000. Christmas Islands not common in the interior of the island during the day - fairly common around the edges.

At 1600 we began blood sampling, doing Phoenix Island and Christmas Islands. Obtaining 30 samples from each species took until ¹⁹⁰⁰ ~~1900~~ mainly because the Christmas Islands weren't very abundant. Stopped and turned to banding at 1900. We plan to obtain additional samples on both Cook Island and Motu Tolu. Banding went well even though someone was still stiff and tired from yesterday's long ~~trip~~ trek around Jarvis.

On the way into the boat channel we encountered a group of approximately 400 of the small dolphin species. This same species was present here last March, but was not here in June or in November. This dolphin is very small (4-5 feet), khaki in coloration and very acrobatic in habit. They are always encountered in the shallows near the breakers between Cook Island and the London boat landing. They repeatedly leap out of the water and revolve several times before falling back in. They also have another out of the water antic that occurs with regularity. This is a rather stiff,

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March 12

Motu Uena, Christmas Island

arch-backed posture that is better illustrated than described. The dolphin raises up ^{out of} the water so that $\frac{3}{4}$ of its length is exposed. The ~~body~~ ^{back} is slightly bowed, the head is held high and the entire body is rigid. Once the momentum of the thrust has been lost the dolphin, still rigid, topples forward onto its belly.

While coming through the channel we had them 15 to 20 deep on all sides of the rubber raft—very close enough to the sides to be touched with a short paddle. When undisturbed these ~~dolphins~~ dolphins spend a great deal of time in the shallows, floating with their dorsal fins exposed, apparently basking and relaxing in the sun. They can be observed jumping throughout the day.

On Motu Uena, Dick Merrill found a Phoenix Island egg that was paper thin and rubbery like ~~an~~ ^{that} of a reptile. The egg had numerous dents and creases so we broke it to inspect the contents. The egg was not incubated but was apparently fertile.

Merrill finished his strings and sacked out at 1145 because he had to make the blood run. Ralph quit around 1230. Huber and I kept banding until 3:15 am.

Saw a few ticks here and there but could find no concentrations.

March 13

Cook Island, Christmas Island

Got up at 0600 and headed back to the main pier to drop Merrill off and then headed for Cook. Had camp set up by 1000 and Huber and Ralph sacked out. I wandered around the island banding odds and ends with a net until 12 and then returned to wake up the other two in order to send them after Merrill. Then at 1300 I sacked out for an hour.

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March 13

Cook Island, Christmas Island

There are Sooty Terns in the interior on the south end of Cook - several thousand - but apparently there aren't many nesting. Whether or not they're nesting doesn't much matter because of the moonlight. Since the moon will be up for all but about 1 hour tonight the Sooties will be virtually impossible to band. Later this evening we hope to be able to net enough for 2-50 blood samples and possibly a few more to band.

Tonight we'll just crash around all over the island banding anything we happen to run across. There are lots of odds and ends on this island that we've never had time (or bothered) to band so tonight we'll work them over as well as possible.

We had intended to do some diving in the lagoon off of Cook Island for 3 months but won't due to the strong winds. A steady 20-30 mph wind has created 1 foot waves and has clouded the water too much for good visibility. The entire lagoon, on this side of the atoll, is very murky at the present time.

At 3 pm Ralph and I headed south to band Red-tailed Tropicbirds and any shearwaters and petrels we could capture while Huber went north. A total of 10 Tropicbirds were found. Hawaiian Noddy Terns are rebuilding their nests, a few already have eggs and 4 small chicks were found. A few recently fledged Common Noddys are scattered here and there on the island. About 200 Sooty Terns were wandering about in the thick underbrush on the south end some of ~~the~~ those inspected were ~~injured~~ injured and on the verge of starvation - the leftovers from the last breeding colony. There are about 14 nested Tern nestlings on the north beach

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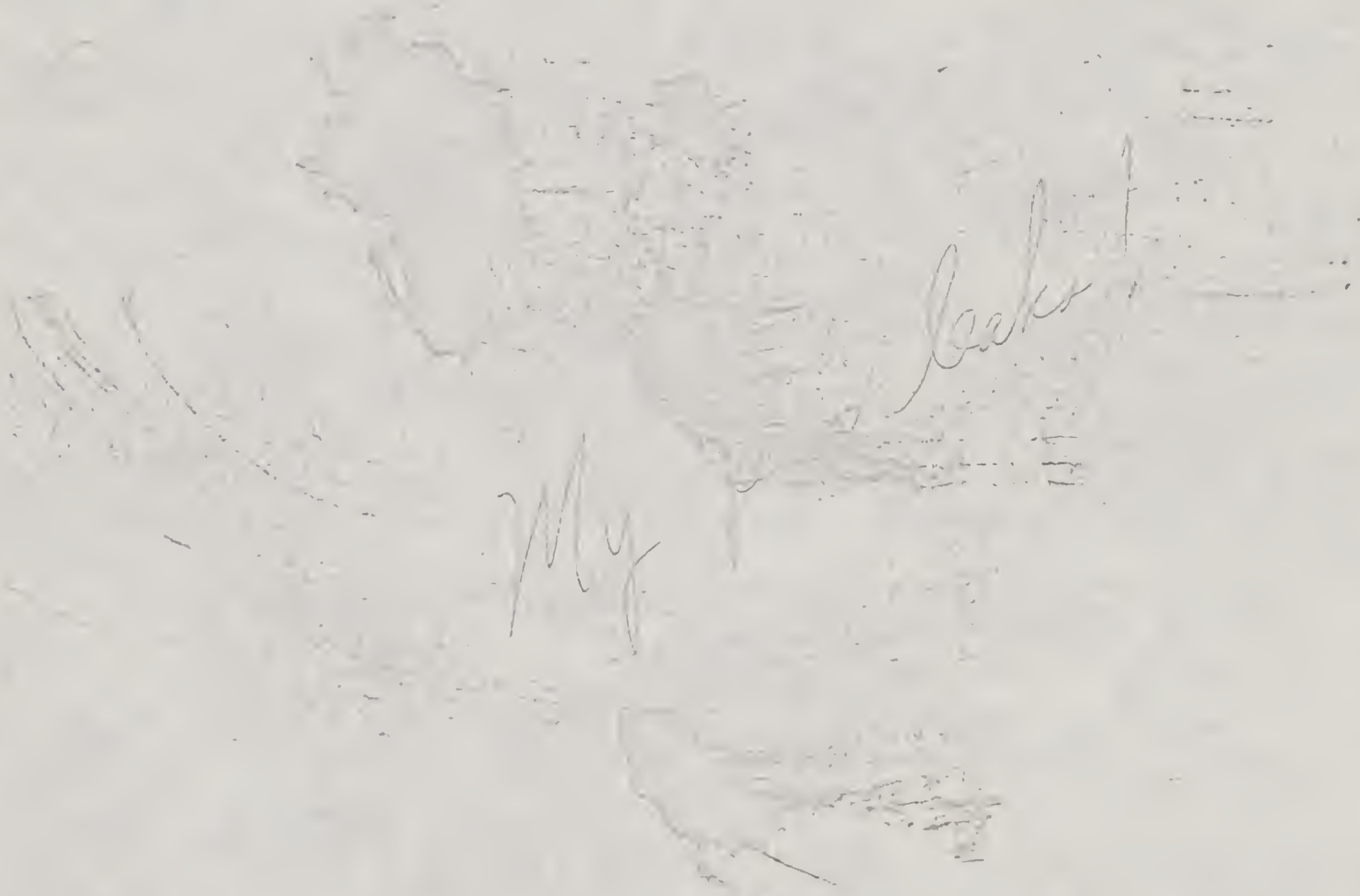
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March 13

Cook Island, Christmas Island

and several immatures flying around begging loudly from the accompanying adults. Later, Larry banded 11 noddies along the northwest beach.

We banded until 1230 and the results were as represented. We caught small numbers of every species on the island except the White-thr. Storm Petrel. All species were extremely jumpy which necessitated the use of nets. The Sooty Terns were as jumpy and took flight so rapidly that we neither banded nor blood sampled any. Once flushed all species flew at about 20 feet ^{high} and each bird that was banded had to be caught off guard and captured quickly.



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March 14

Motu Tabu, Christmas Island

Since it was low tide and there wasn't any need to hurry over to Motu Tabu we all slept late this morning. Finally got up at 0900 and broke camp. The trip to Motu Tabu was, as usual, a rough one directly into the wind and the waves. It took 1 1/2 hours to make the trip and we all got soaked because of two-foot waves being generated by the strong winds.

The vegetation on all of these small islands has been lush and green with most species in full flower. Recent rainfall has, apparently, been good. The coconut palms, however, are brown and unhealthy in appearance suggesting that, over a long period of time, the total rainfall hasn't been sufficient. Coconuts that were broken open contained very little milk for their size.

Tonight we'll have a full moon for the entire night so aside from the shearmasters and petrels we'll just be able to band a few odds and ends as we did on Cook Island.

Phoenix Island Petrels are everywhere on this island. Noddies are under just about every bush. With this population it shouldn't be too difficult to band over 1000 tonight in spite of the nearly full moon. Christmas Islands are very scarce except on the east end of Motu Tabu so we probably won't band more than 100 or so.

Tonight we ^{expect to} run out of number 4 bands ~~of 1000~~ ^{so}. I tried the number 5 size on the Phoenix Islands and found that it slid off the foot with ease. The number 3 size goes most of the Phoenix Islands very nicely if it is put on carefully. All the ones I tried spun freely on the tarsus and should not affect the bird.

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March 14

Motu Tabu, Christmas Island

in any way although they may wear faster than the number 4's that are normally used for this species. From the looks of ~~it~~ the number 3A band would fit the Phoenix Islands better than a number 4 band. It will be interesting, on future trips, to see if the number 3 band does wear faster than the number 4 band.

Wedge-tailed Shearwaters are quite abundant along the north and west shores and in the interior of the island in the Lepturus. On Motu Uyuva there is very little Lepturus and the Wedge-tail population is quite ~~spotty~~ spotty.

We ran out of #4's around 11 p.m. and switched over to the number 3 bands just long enough to use up all of the incomplete strings on hand.

Finished banding at midnight and sacked out promptly because we have to break camp around 6 a.m. in order to get back to the dock by 8 a.m.

March 15

Motu Tabu and Enroute to Palmyra Island

Up at 0620 and quickly broke camp. In the boat heading for the dock at 0705. This morning was beautiful with very little wind and almost no waves in the ~~lagoon~~ lagoon - a condition we've seldom seen here. There was a large ~~low~~ storm brewing to the east of us as we shoved ~~off~~ ^{ran}.

off for the pier on the mainland but it didn't catch up with us. We rode the whaleboat out to the ship (pulling the two rubber rafts). Underway for Palmyra by 0945. Did paper-work and some odds and ends before sacking out at 1330.

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March 16 Palmyra Island

Sighted Palmyra around midday and sent the whaleboat in with the crew around 1400. Last night I went to see the ship's corpsman about my coral infections and he immediately placed me on restriction for the duration. So now in addition to a daily shot of penicillin I have to soak the infections on both legs in a hot water bath morning and evening. Each bath is followed by a slightly painful session during which the infection has to be scrubbed out of the wound by means of a Q-tip or through the use of some sort of abrasive object. This smarts a bit because the center portions of the infections are extremely tender.

Between treatments I am free to do as I wish so my stay on the ship will be devoted to banding records, final packing and complete final trip inventories.

March 17 Palmyra Island

Spent the entire day carrying gear from the lab down into the afterhold. Four hours were spent in rummaging through all trunks and containers in the afterhold in order to inventory and repack them. A complete band inventory was made.

A note from Max informed me that between 500,000 to 1,000,000 Sooty Terns were covering the runway on Cooper Island from one end to the other. This I'd like very much to have seen.

Couldn't sleep so got up & read a book until 4 a.m.

March 18 Palmyra Island

Unloaded the bulk of the gear from the lab, inventoried and then stacked it away in several trunks and a number

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March 18

Palmyra Island.

of ammunition boxes. Just a few items left to be packed away but can't do much more until all of the gear being used by the groups ashore is brought back to the ship. Once it is aboard the rest of the packing can be completed in about 1 hour.

The coral infections are showing great improvement. Virtually all of the inflammation is now gone and some of the smaller ones have started to dry up and heal over. The larger and deeper ones are still quite tender but they are also coming along nicely. In another two or three days they should all be well on the way to complete healing.

Sacked out at 12.

March 19

Enroute to Pearl Harbor

Headed for home at least - another 3 days should see us there.

This morning the whaleboat was sent in to pick up the crew at the first light of dawn. The ship then pulled up anchor and moved over to meet the whale boat as soon as it cleared the reef. Underway, with full power, by ~~0800~~ 0830.

Well, it finally happened on one of these trips. Some of the crewmen were foolish enough to have eaten a fish, a Red Snapper, that was caught from the fantail of the ship. One fellow just started to take a taste and then spit it out because he didn't like the garlic and he was the only one who bucked out. One fellow ate one ~~big~~ piece and just got an upset stomach. The

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March 19

Palmyra Island

third man ate a slab and within 12 hours he was ^{nauseous} ~~nauseous~~.
The fourth man went whole hog and ate about a pound
of the fish and within 6 hours was in real agony. This
morning he was in shock and in extremely bad shape.
All of this needless suffering simply because many people
just won't believe they are vulnerable to such things.
The "it can't happen to me" attitude gets more people in
trouble. Throughout this trip we have constantly made
it a point to say something about the dangers of fish
poisoning to the crewmen whenever they were fishing. Yesterday
when the snapper that was eaten was caught someone
remarked that they bet it would taste delicious and I
stated I wouldn't eat that fish on a bet. Ironically,
two of the men who ~~are~~ are now below suffering from
the very thing I was afraid of were standing there when I
made that statement. I certainly hope this isn't a
really serious or debilitating dose of the poisoning.

This afternoon as the corpsman was giving the fish poisoning
victim an injection the victim had a fit and the needle was broken
off. They rushed him down to the Chief's quarters and
operated on his arm to remove the needle. The fellow is now
in Kirkpatrick's bed below Fred and me. A short while ago
one of the crewmen slipped on the wet deck & wrenched his back.
All sorts of bad things are happening at present. It is certainly
a sorry way to end what has otherwise been a very good cruise.
Worked on a little packing and inventorying today. Not much
to be done now since I packed 9 ^{of} of the gear while the crew was
on Palmyra.

Got my fourth shot of penicillin tonight. Sacked out at
0930.

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March 20

Enroute to Pearl Harbor

It took all morning to get my soak treatments as I didn't get a thing accomplished - not that there is a great deal to be done at this stage of the game. In the meantime Huber + Woodward skinned birds, Merrill puttered around packing navigation lights + Max puttered around with paper-work.

One fish poisoning victim is up and around this morning. The fellow with the worst case is also greatly improved and is feeling pretty chipper this morning.

Since the seas are running fairly smooth we have been making excellent time - around 15 knots good. We are already about two hours ahead of schedule. Arrival is set at 1400 on the 22nd.

More ship problems: one man fell and is believed to have slipped a disk and is now in traction. Another man dropped a bunch of metal trays on his foot and ~~there~~ believed to have broken his toe. The ship's corpsman is about ready to go out of his mind.

March 21

~~Enroute~~ Enroute to Pearl Harbor

The ATF doldrums have now set in. I have absolutely no ambition and even less inspiration at the present time. All of the trips seem to end this way. As soon as you leave the last island and head for home you begin to relax and then the tired feeling settles in.

Beautifully calm sea all day which has permitted us to maintain speeds in excess of 13 knots so that we will arrive in ~~Pearl~~ Pearl Harbor and be tied up by 1300 tomorrow.

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March 21

Enroute to Pearl Harbor

Wound coral infections have shown remarkable improvement during the past 24 hours. The extreme tenderness is rapidly decreasing and there are no longer large daily deposits in each of the wounds. At first they didn't respond too well to treatment and a static state was soon reached. Treatment and ~~medications~~ medications were changed and since then improvement has been rapid.

Small numbers of Sooty Shearwaters have been flying by the ship throughout the day headed NNW. Most groups contained from 4 to 7 birds and there were quite a few solitary travelers. A few Sooty Terns and Wedge-tailed Shearwaters were also seen.

At every opportunity, since collecting them on McKean Island on February 7, we have watched the three bottles of ticks. As the result, although there has been some mortality, all of the bottles contain a number of healthy and active specimens. This is the first time we have managed to keep ticks alive through an entire trip. After sealing them in the bottles with cheesecloth tops we have not disturbed them at all. Nothing was placed in the jars with the ticks except a piece of paper towel or, in one instance for the ticks collected on furins, cellulocotton. They were kept in the lab and were not placed in the refrigerator as several collections were on other trips.

March 22

Pearl Harbor

Sighted island around 0830. Had to wait until the morning sorter of ships went out. Finally tied up to the pier at 1400 and were met by the Elms. Spent the rest of day arranging transportation and moving people to the hotel.